

U. S. NAVAL AMMUNITION DEPOT
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QEWE2-HMS:bc
8900
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19 NOV 1964

From: Commanding Officer, U. S. Naval Ammunition Depot, Crane, Indiana
To: National Aeronautics and Space Administration, Goddard Space Flight Center, Electrochemical Power Sources Section (636.2), Space Power Technology Branch, Greenbelt, Maryland 20771

Subj: Monthly Progress Report on National Aeronautics and Space Administration Space Cell Test Program; submission of

Encl: (1) Monthly Progress Report as of 31 October 1964 (3 copies)

1. The progress report for National Aeronautics and Space Administration purchase order W11,252B on the space cell test program is submitted as enclosure (1).

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By direction

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GPO PRICE \$
OTS PRICE(S) \$
Hard copy (HC) 3.00
Microfiche (MF) .25

N65 13149
(ACCESSION NUMBER)

FACILITY FORM 602
96
(PAGES)
CL59863
(NASA CR OR TMX OR AD NUMBER)

(THRU)
1
(CODE)
03
(CATEGORY)

MONTHLY PROGRESS REPORT THROUGH 31 OCTOBER 1964

LIFE CYCLE TESTS

1. Status of Cycling Program.

a. Total number of packs cycled to date - 98.

(1) Fifty 10-cell packs and 48 5-cell packs.

b. Total number of packs still cycling - 75.

(1) Thirty-nine 10-cell packs (Nickel Cadmium).

(a) 11 General Electric 3.0 ah packs.

1. One pack was removed from test as six of the 10 cells in the pack have failed.

(b) 9 Gould-National Batteries, Inc. 3.5 ah packs.

1. Three packs were removed from test as six of the 10 cells in each of two packs and all cells in the third pack have failed.

(c) 11 Sonotone Corporation 5.0 ah packs.

1. One pack was removed from test as six of the 10 cells have failed.

(d) 8 Gulton Industries, Inc. 6.0 ah packs.

1. Four packs were removed from test as six of the 10 cells in each of three packs and seven in the fourth pack have failed.

(2) No 10-cell packs (Silver Cadmium).

(a) 0 Yardney Electric Corporation 12 ah packs.

1. The two packs were removed from test as six cells of one pack and all ten of the other one leaked electrolyte.

(3) Thirty-five 5-cell packs (Nickel Cadmium).

(a) 12 General Electric Company 12 ah packs.

1. One pack was removed from test as three of the five cells failed.

(b) 7 Gould-National Batteries, Inc. 20 ah packs.

1. Five packs were removed from test as three of the five cells in each pack failed.

(c) 1 Gulton Industries, Inc. 6.0 ah pack.

(d) 2 Gulton Industries, Inc. 50 ah packs.

(e) 7 Gulton Industries, Inc. 20 ah packs.

1. Five of these 5-cell packs have been removed from test for failures of three or more cells in each pack.

(f) 6 Gulton Industries, Inc. 4.0 ah commercial packs.

(4) One 5-cell pack (Silver Zinc).

(a) 1 Delco Remy 25 ah pack.

1. One pack was removed from test as all cells failed.

2. Test Parameters.

a. Ambient Temperatures:

(1) 0° C.

(2) 25° C.

(3) 40° C.

b. Voltage limits per pack on charge:

(1) 1.55 ± 0.03 volts per cell at 0° C.

(2) 1.49 ± 0.03 volts per cell at 25° C.

(3) 1.45 ± 0.03 volts per cell at 40° C.

(4) 1.97 ± 0.03 volts per cell at 25° C on the silver zinc packs.

c. Depths of Discharge:

(1) 90-minute and 3-hour orbits:

(a) 15 percent and 25 percent at 0° C.

(b) 25 percent and 40 percent at 25° C.

(c) 15 percent and 25 percent at 40° C.

(2) 24-hour orbits:

(a) 50 percent at 0° C, 25° C and 40° C.

(b) 40 percent at 25° C on the silver zinc packs.

d. Orbit Times:

- (1) 90 minutes--30 minute discharge and 60 minute charge.
- (2) 3 hours--30 minute discharge and 150 minute charge.
- (3) 24 hours--1 hour discharge and 23 hour charge.

3. Data.

a. Normal operation schedules complete data to be recorded on 90-minute and 3-hour packs every 32 cycles. On 24-hour cycles, complete data is taken every eight cycles.

b. The attached data sheets give end of discharge and end of charge voltage readings for each cell on each cycle recorded.

4. Cell Failures.

<u>Cell Type</u>	<u>Failures October 1 through October 31, 1964</u>	<u>Total Failures To Date</u>
General Electric 3.0 ah	3	19
Gould 3.5 ah	3	40
Sonotone 5.0 ah	3	17
Gulton 6.0 ah	5	52
General Electric 12 ah	3	5
Gould 20 ah	0	22
Gulton 20 ah	0	16
Yardney 12 ah (Silver Cadmium)	0	16
Delco Remy 25 ah	0	5

5. Cell Failure Analysis.

a. All failure analysis results are cumulative. These results are shown in pages 5 through 23.

6. Capacity Tests.

a. Prior to cycling, each pack was given a capacity test at its respective cycling temperature. This check consisted on a c/10 charge for 16 hours followed by a c/2 discharge to 1.0 volt/cell average. After each 88 days of

cycling, each pack was discharged at the c/2 rate to 1.0 volt/cell average following a charge at the cycle rate. The pack was then recharged at the c/10 rate for 16 hours and discharged at the c/2 rate to 1.0 volt/cell average. The pack was then recharged at the c/10 rate for 48 hours, voltage limited to the cycle limits. Data of capacity tests is tabulated on pages 24 through 26.

CELL NUMBER		DISCHARGE CAPACITY (AMPERES)		TEST TIME (HOURS)		TEST TEMPERATURE		CELL POSITION IN PACK		CYCLES COMPLETED		FAILURE ANALYSIS		CELL TYPE: General Electric 3.0 Ampere-Hour	
16	40%	1.5	25°	427	7	3985*	Low Volt. Disch, Normal Volt. Chg, Pos Tab Broken and Touching Case, Burned Tape on Tab Caused by Overheating From Poor Tab Weld.								
			25°	58	6	4473*	Low Volt. Disch, Normal Volt. Chg, Short on One Edge of Plates, Neg. Plate Material Penetrated Separator.								
			25°	361	1	4741*	Low Volt. Disch, Normal Volt. Chg, Shorted, Separator Deteriorated, Neg. Plate Material Penetrated Separator.								
39	15%	1.5	50°	541	2	780	Low Volt. Disch, High Volt. Chg, Leaked, Shorted at Top of Core, Separator Too Short, Pos. Tab Burned.								
			40°	540	6	2083	Low Volt. Disch, High Volt. Chg, Leaked, Shorted at Top of Core, Separator Too Short, Pos. Tab Burned.								
			40°	549	7	2523	Low Volt. Disch, High Volt Chg, Pos. Tab Burned.								
40	25%	1.5	40°	464	3	2073	Low Volt. Disch, High Volt, Chg, Shorted at Top of Core, Separator Too Short, Pos. Tab Burned								
			40°	3131	8	2182	Low Volt. Disch, Normal Volt. Chg, Leaked, Loose Plate Material on Separator.								
			40°	47	7	2182	Low Volt. Disch, High Volt. Chg, Shorted at Top of Core, Separator Too Short, Pos. Tab Burned and Broken.								
			40°	49	5	2446	Low Volt. Disch, High Volt. Chg, Pos. Weld to Terminal Stud Burned, Poor Weld.								
			40°	45	10	2461	Low Volt, Disch, High Volt. Chg, Loose Plate Material on Separator, Short at Outside End of Pos. Plate.								
			40°	466	2	2509	Low Volt. Disch, High Volt. Chg, Leaked, Pos. Tab Burned and Shorted to Neg. Tab.								
			40°	441	6	2509	Low Volt. Disch, High Volt, Chg, Leaked, Shorted at Top of Core, Separator Too Short, Pos. Tab Burned.								

* FAILED DURING THIS REPORTING PERIOD.

CELL TYPE: General Electric 3.0 Ampere-Hour						
PACK NUMBER	DEPTH OF DISCHARGE (HOURS)	TEST TEMPERATURE	CELL NUMBER	TEST CYCLES	FAILURE ANALYSIS	
					POSITION IN PACK	TIME OF TEST
43	15%	3.0	416	4	1182	Low Volt. Disch, Low Volt. Chg, Shorted at Top of Core, Separated Too Short, Pos. Tab Burned.
					499	3
					412	6
					1911*	Showed Open Circuit at Start of Cycle, Pos. Tab Broken, Burned Tape on Tab Caused by Over Heating From Poor Tab Weld.
44	25%	3.0	222	6	1672*	Showed Open Circuit at Start of Cycle, Pos. Tab Broken, Burned Tape on Tab Caused By Over Heating From Poor Tab Weld.

Failure Analysis							
Cell Type:	Gould 3.5 Ampere Hour						
Cell Number:	Depth of Discharge (%)	Orbit Period (hours)	Test Temperature (°C)	Cell Position	Cycles Completed	Failure Analysis	Cell Type:
3	25%	1.5	25°	73	5	2785	Low Volt. Disch, High Volt. Chg, Short Near Center of Core, Piece of Pos. Plate Material Between Plates Causing Short Through Separator.
			25°	54	2	3090	Low Volt. Disch, Low Volt. Chg, Leaked, Lost 1.7 gm, Weak Weld on Neg. Tab to Plate.
			25°	165	9	4081	Low Volt. Disch, Normal Volt. Chg, Leaked, Lost 1.7 gm, Deposit on Glass Seal, Short Through Separator, Short at Pos. Tab Near Center of Core, Neg. Tab Weld to Plate Weak.
			25°	93	6	4289*	Low Volt. Disch, Normal Volt. Chg, Leaked Around Glass Seal, Lost 2.6 gm, Separator Deteriorated, Neg. Plate Material Penetrated Separator.
			25°	97	7	4401*	Low Volt. Disch, Normal Volt. Chg, Leaked Around Glass Seal, Lost 2.5 gm, Separator Deteriorated, Neg. Plate Material Penetrated Separator.
			25°	81	7	1609	Low Volt. Disch, Normal Volt. Chg, Leaked, Lost 3.2 gm, High Pres. Bulge Top, Burnt Separator Near Top - Foreign Particle.
			25°	90	8	1862	Low Volt. Disch, Low Volt. Chg, Leaked, Lost 2.7 gm, High Pres. Bulge Top.
			25°	43	6	2954	Low Volt. Disch, Low Volt. Chg, Leaked, Lost 1.3 gm, Plate Material on Separator.
			25°	27	3	3029	Low Volt. Disch, Normal Volt. Chg, Deposit on Glass Seal, Separator Deteriorated.
			25°	198	10	3164	Low Volt. Disch, Low Volt. Chg, Leaked, Lost 1.6 gm, Separator Deteriorated, Pos. Plate Material Between Plates.

CELL TYPE: Gould 3.5 Ampere-Hour							
PACK NUMBER	DEPTH OF DISCHARGE (%)	TEST TEMPERATURE (°)	ORBIT PERIOD (HOURS)	COMPLEX FAILURE		FAILURE ANALYSIS	CELL NUMBER
				NUMBER OF CYCLES	POSITION IN PACK		
8	40%	3.0	25°	68	6	1346	Low Volt. Disch, Low Volt. Chg, Leaked, Lost 1.5 gm, Plate Material on Separator.
			25°	112	8	1705	Low Volt. Disch, Normal Volt. Chg, Leaked, Lost 2.0 gm, Pos. Tab Weld to Bottom of Can Weak, Pos. Tab Weld to Plate Weak.
			25°	39	1	1985	Low Volt. Disch, Normal Volt. Chg, Deposit on Glass Seal, Separator Deteriorated, Neg. Plate Material on Separator.
			25°	170	10	1985	Low Volt. Disch, Normal Volt. Chg, Leaked, Lost 1.8 gm, Pos. and Neg. Tab Weld Weak to Plates Near Center of Core, Separator Deteriorated at Center of Core.
			25°	78	7	2138*	Low Volt. Disch, Low Volt. Chg, Leaked Around Glass Seal, Lost 1.4 gm, Pos. Tab Weld to Case Weak, Separator Deteriorated, Neg. Plate Material Penetrated Separator.
			25°	40°	13	2901	Low Volt. Disch, Low Volt. Chg, Leaked, Lost 1.5 gm, Separator Deteriorated, Pos. Plate Material on Separator.
			40°	195	8	2901	Low Volt. Disch, Normal Volt. Chg, Leaked, Lost 3.6 gm, Short Through Separator, Separator Burned at Center of Core, Pos. Plate Material on Separator.
			40°	103	7	2998	Low Volt. Disch, Normal Volt. Chg, High Pres, Short Through Separator, Pieces of Pos. Plate Material Between Plates.
			40°	200	10	3270	Low Volt. Disch, Normal Volt. Chg, Leaked, Lost 2.5 gm, Short Through Separator, Separator Deteriorated at Center of Core, Pos. Tab Weld to Case Weak.
			40°	197	9	4102*	Low Volt. Disch, High Volt. Chg, Leaked Around Glass Seal, Lost 1.4 gm, Short at Pos. Tab, Separator Deteriorated, Neg. Plate Material Penetrated Separator.

PACK NUMBER	DEPTH OF DISCHARGE (%)	TEST NUMBER	TEST TEMPERATURE (°)	CELL NUMBER	POSITION IN PACK	COMPLETION CYCLES	CELL TYPE: Gould 3.5 Ampere-Hour	FAILURE ANALYSIS
							NUMBER OF HOURS (HOURS) PERIOD	
28	25%	1.5	50°	122	2	408	Low Volt. Disch, Normal Volt. Chg, Leaked, Lost 1.8 gm, Weak Bottom Weld Suspicious Spot but not Definite.	
			40°	157	7	494	Low Volt. Disch, Normal Volt. Chg, Leaked, Lost 2.0 gm, High Pres. Bulge.	
			40°	158	8	860	Low Volt. Disch, Normal Volt. Chg, Leaked, Lost 1.9 gm, High Pres. Bulge Top.	
			40°	141	5	860	Low Volt. Disch, High Volt. Chg, Leaked, Lost 3.5 gm.	
			40°	168	10	1293	Low Volt. Disch, High Volt. Chg, Weak Weld to Bottom of Case.	
			40°	121	1	1811	Low Volt. Disch, Low Volt Chg, Short at Outside End of Plates, Grid Wire Penetrated Separator.	
			40°	133	3	1811	Low Volt. Disch, High Volt. Chg, Weak Weld on Pos. Tab to Case.	
			40°	140	4	1811	Low Volt. Disch, Low Volt. Chg, Short Around Pos. Tab, Blistering on Pos. Plate, Active Neg. Plate Material on Separator.	
			40°	155	6	1811	Low Volt. Disch, Low Volt. Chg, Short Through Separator, Weak Weld to Bottom of Case.	
			40°	163	9	1811	Low Volt. Disch, Low Volt. Chg, Short Through Separator, Weak Weld to Bottom of Case, Deposit on Glass Seal.	
			31	15%	3.0	40°	R166	1500
								Low Volt. Disch, Low Volt. Chg, Leaked, Lost 7.1 gm, Separator Deteriorated.
							R179	1500
								Low Volt. Disch, Low Volt. Chg, Leaked, Lost 1.5 gm, Short Through Separator, Separator Deteriorated, One Weak Tab.
							R92	1696
								Low Volt. Disch, High Volt. Chg, Pieces of Plate Material Shorted Through Separator, Separator Deteriorated.

Failure Analysis						
Cell Number	Depth of Discharge (%)	Orbit Period (Hours)	Test Temperature (°C)	Cell Number	Test Temperature (°C)	Orbit Period (Hours)
32	25%	3.0	40°	125	40°	4.0
				65	40°	4.0
				67	40°	4.0
				132	40°	4.0
				149	40°	4.0
				138	40°	4.0
				495	40°	4.0
				800	40°	4.0
				875	40°	4.0
				875	40°	4.0
				975	40°	4.0

CELL TYPE: Sonotone 5.0 Ampere-Hour								
PACK NUMBER	DEPTH OF DISCHARGE (%)	TEST TEMPERATURE (HOURS)	TEST NUMBER	FAILURE ANALYSIS		TEST POSITION IN PACK	NUMBER OF CYCLES COMPLETED	
				TIME PERIOD (HOURS)	TEMPERATURE (DEGREES)			
1	25%	1.5	4361	4	2995	Low Volt. Disch, High Volt. Chg, Inclusion on Surface of Outside Pos. Plate Wore Hole Through Separator and Thin Outside Wrap, Separator Sticking to Neg. Plate, Glass Seal Leaked.		
2	40%	1.5	4335	1	4423*	Low Volt. Disch, High Volt. Chg, Neg. Tabs Weak Weld to Plates, Separator Melted at Center of Core, Extreme Pressure Points on Separator From Scoring Causing High Resistance Shorts.		
				811	10	3155*	Shorted on Cycling, Leaked Around Seal, High Pressure Bulge on Bottom, Insulators Brittle, Exposed Grid Wires at Center of Core Penetrated Separator Causing Large Burned Area at Short, Pos. and Neg Tab Weld Poor.	
				3628	5	3992*	Low Volt. Disch, Normal Volt. Chg, Leaked Around Seal, High Pressure Bulge on Bottom, Hole in Separator Exposing Pos and Neg Plates, Neg Plate Material Penetrated Separator.	
				3613	2	4411*	Low Volt. Disch, Low Volt. Chg, Two Pieces of Neg Plate Material Wore Hole in Separator at Scoring Mark, Burned Thru Plates, Neg Tab Welds Poor, Separator Beginning to Deteriorate.	
6	40%	3.0	4324	8	1069	Low Volt. Disch, Normal Volt. Chg, Separator Impregnated With Active Material, Separator Sticking to Neg. Plate.		
				6904	10	1136	Low Volt. Disch, Low Volt. Chg, Small Hole in Separator at Start of Coil, Pos. Plate Edge Broken Allowing Grid Wire to Penetrate Separator.	
				3637	4	1161	Grid Wires of Pos. Plate Penetrated Separator and Shorted to Neg. Plate, Active Plate Material Penetrated Separator at Three Points, Bad Tab Welds.	

PACK NUMBER	DEPTH OF DISCHARGE (%)	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	FAILURE ANALYSIS	CELL TYPE:	Sonotone 5.0 Ampere Hour
26	25%	1.5	40°	4323	1	2487	Grid Wire Penetrated Separator at Tabs.		
				6773	9	2902*	Shorted on Cycling, Slight Burn Adjacent to Neg Tab, Separator Deteriorated, Neg. Plate Material Penetrated Tab Welds Weak.		
				7224	6	2993*	Low Volt. Disch, Normal Volt. Chg, High Pressure Bulge, Deposit Around Seal, Neg. Tab Weld Weak, Neg. Plate Material Penetrated Separator.		
				7232	7	2993*	Low Volt. Disch, Normal Volt. Chg, High Pressure Bulge, Deposit Around Seal, Pos. Tab Weld Weak, Plate Broken at Pos. Tab, Deep Pressure Points From Scoring, Separator Completely Deteriorated.		
				4881	3	3344*	Shorted on Cycling, Complete Short From Deep Scoring, Plate Shorted Through Outer Wrap.		
				4240	4	3625*	Low Volt. Disch, Low Volt. Chg, Separator Deteriorated, Plate Material Penetrated Separator.		
				3626	1	1418*	Shorted on Cycling, Neg. Tab Welds Poor, Active Plate Material Penetrated Separator at Scoring Marks.		
29	15%	3.0	40°						
30	25%	3.0	40°	3657	7	856	Hole in Separator Allowing Pos. Plate to Hit Case, Separator Damaged at Center of Cell Allowing Pos. and Neg. Plate to Short Together.		
49	15%	1.5	0°	6887	9	2010	Low Volt. Disch, Low Volt. Chg, Burn on Separator Opposite Pos. Tab.		

PACK NUMBER	DISCHARGE DEPTH OF CHARGE (%)	DISCHARGE PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	FAILURE ANALYSIS	CELL TYPE: Gulton 6.0 Ampere Hour	
								TEST HOUR	NUMBER OF CYCLES
18	40%	3.0	25°	1615	3	608	Low Volt. Disch., Normal Volt. Chg., Deposit Top of Pos. Terminal, Lost 5.1 gm., High Pres. Bulge	643	643
			25°	1827	7	643	Low Volt. Disch., High Volt. Chg., Ceramic Short	1145	1145
			25°	2228	9	1550	Low Volt. Disch., Low Volt. Chg., Ceramic Short, Blistering on Pos. Plates	1233	1
			25°	1562	5	1550	Low Volt. Disch., Low Volt. Chg., Ceramic Short, Blistering on Pos. Plate, Neg. Plate Material on Separator	1764	3
			25°			239	Low Volt. Disch., Volt. Did Not Increase on Following Chg., (1.00 V.), Lost 4 gm., Ceramic Short	1784	8
			40°			1566	Low Volt. Disch., Low Volt. Chg., Lost 10.5 gm., Ceramic Short	1802	4
			40°			2819	Low Volt. Disch., Low Volt. Chg., Ceramic Short, Blistering on Pos. Plate	2333	10
			40°			2981	Low Volt. Disch., Normal Volt. Chg., Ceramic Short, Blistering on Pos. Plates	1454	8
			50°			37	No Volt. on Chg., or Disch., Ceramic Short	1815	6
			50°			114	Volt. Fell Off During Disch., Chg. Volt. Slightly Low, Lost 3.5 gm., Ceramic Short	1853	9
			40°			187	Rev. on Disch., Chg. Volt. Normal, Lost 4 gm., Deposits Around Pos. Terminal (Outside), Ceramic Short	1627	3
			40°			225	Low Volt. Disch., High Volt. Chg. on Cycle 219, Dead on 225, Lost 3.5 gm.		

PACK NUMBER	DISCHARGE DEPTH (%)	TEST PERIOD (HOURS)	TEST TEMPERATURE (°C)	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	FAILURE ANALYSIS	Gulton 6.0 Ampere Hour	
								VOLTAGE (V)	CURRENT (A)
38	25%	1.5	40°	2405	5	1333	Low Volt. Disch., Normal Volt. Chg., Pos. Bus Shorted to Case		
			40°	1626	2	1377	Low Volt. Disch., Low Volt. Chg., High Pres. Bulge, Ceramic Short		
41	15%	3.0	40°	1771	9	650	Low Volt. Disch., High Volt. Chg., Ceramic Short		
			40°	1801	6	1063	Low Volt. Disch., Normal Volt. Chg., Ceramic Short		
			40°	3135	2	1132	Low Volt. Disch., Normal Volt. Chg., Ceramic Short		
			40°	1852	7	1157	Low Volt. Disch., Normal Volt. Chg., Ceramic Short, Blistering on Pos. Plates.		
			40°	2221	8	1157	Low Volt. Disch., Normal Volt. Chg., Ceramic Short		
			40°	1632	3	1689	Low Volt. Disch., Normal Volt. Chg., Ceramic Short, Blistering on Pos. Plates		
42	15%	3.0	50°	2309	8	96	Low Volt. Disch., Normal Volt. Chg., Ceramic Short		
			40°	2346	7	383	Low Volt. Disch., Low Volt. Chg., CO ₃ on Bottom of Case, Ceramic Short		
			40°	2306	9	417	Low Volt. Disch., High Volt. Chg., Ceramic Short		
			40°	918	1	484	Low Volt. Disch., Low Volt. Chg., High Pres. Bulge, Deposit on Bottom of Case, Ceramic Short, Lost 3.1 gm.		
61	15%	1.5	0°	1622	2	1	Volt. Between 0.25 and 0.3 V. Throughout Cycle, Side Concave, Burnt Case, End Neg. Pushed Into Pos. Tab		
			0°	1845	8	6	Lost 5 gm., Leak at Weld on Bottom, High Pres. Bulge		
			0°	2397	5	2762	Low Volt. Disch., Low Volt. Chg., Ceramic Short		

Cell Type: Gulton 6.0 Ampere-Hour						
Pack Number	Depth of Discharge (%)	Orbit Period (Hours)	Test Temperature (°)	Cell Number	Position in Pack	Cycles Completed
62	25%	1.5	0°	1630	10	2995
66	25%	3.0	0°	1792	4	4066*
			0°	1794	6	1045
			0°	1843	8	1174
			0°	1781	5	1237
			0°	1634	3	1417
Failure Analysis						
Low Volt. Disch, High Volt. Chg, Leaked, Lost 6.8 gm, Ceramic Seal Broken, Deposit on Inside of Ceramic, High Pres. Bulge, Blistering on Pos. Plates						
Low Volt. Disch, Low Volt. Chg, Small Shorts Through Separator Near Pos. Tab, Blistering on Pos. Plate, Separator Deteriorated.						
Low Volt. Disch, High Volt. Chg, High Pres. Bulge, Concave Side, Ceramic Broken, No Seal, Lost 5.1 gm, Pos. Bus Against Case.						
Low Volt. Disch, Low Volt. Chg, Wall Concave, Ceramic Short.						
Low Volt. Disch, High Volt. Chg, High Pres. Bulge Deposit Around Pos. Terminal, Ceramic Broken on Pos. Terminal, Blisters on Pos. Plate, Burnt Spot on Separator at Blisters, Lost 1.3 gm.						
Low Volt. Disch, Normal Volt. Chg, Ceramic Short, High Pres. Bulge, One Side Concave Other Convex, Pos. Plates Blistered, Lost 2.3 gm.						

PACK NUMBER	DEPTH OF DISCHARGE (%)	ORBIT PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	COMPLETION CYCLES	CELL TYPE: General Electric 12.0 Ampere-Hour	FAILURE ANALYSIS
96	40%	1.5	25°	445	3	3822*	Low Volt. Disch, Low Volt. Chg, Separator Penetrated By Neg. Plate Material, Pin Point Shorts Through Separator.	
				446	2	4020*	Low Volt. Disch, Low Volt. Chg, Separator Penetrated by Neg. Plate Material, Pin Point Shorts Through Separator.	
99	25%	1.5	40°	442	4	4020*	Low Volt. Disch, Low Volt. Chg, Separator Penetrated by Neg. Plate Material, Pin Point Shorts Through Separator.	
				429	3	3841*	Shorted on Cycling, Separator Penetrated by Neg. Plate Material, Pin Point Shorts Through Separator, Leaked at Neg. Terminal, Epoxy Lifted Up.	
124	25%	1.5	0°	410	5	3037*	Cell Lost Capacity on Cycling But Came Back When Removed From Pack, So It Was put Back On Cycling In Same Pack.	

CELL TYPE: Gulton 20 Ampere-Hour							
FAILURE ANALYSIS							
PACK NUMBER	DISCHARGE DEPTH OF	OBTAIN PERIOD (HOURS)	TEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES	COMPLETION
73	25%	1.5	25°	396	3	1776	Low Volt. Disch, Normal Volt. Chg, Concave Side, Neg. Ceramic Seal Broken, Lost 23.7 gm.
74	25%	3.0	25°	458	4	1184	Low Volt. Disch, Low Volt. Chg, Leaked, Lost 14.2 gm, Blistering on Pos. Plates
			25°	419	3	1303	Low Volt. Disch, Normal Volt. Chg, Leaked, Lost 21.9 gm
			25°	440	2	1754*	Low Volt. Disch, Normal Volt. Chg, Leaked Around Both Terminals, Ceramic Broken on Neg. Terminal, Lost 18.0 gm, Neg. Plate Material Penetrated Separator, Sides Concaved, Shorting Case to Bus
			25°	468	1	163	Low Volt. Disch, High Volt. Chg, High Pres. Bulge, Lost 8 gm
			25°	388	2	209	Low Volt. Disch, High Volt. Chg, Lost 26.7 gm, Ceramic Short Around Pos. Terminal
			25°	394	3	627	Low Volt. Disch, High Volt. Chg, Lost 16.4 gm, High Pres. Bulge, Deposit on Both Terminals, Ceramic Short, Neg. to Case
			25°	454	4	627	Low Volt. Disch, Low Volt. Chg, Lost 21.6 gm, Deposit on Both Terminals, Sides Concave Hit Bus on Both Sides
			25°	386	5	627	Low Volt. Disch, Low Volt. Chg, Lost 18.1 gm, High Pres. Bulge, Burnt Separator 5th or 6th Neg. Plate Near Top, Ceramic Short
			25°	422	2	153	Low Volt. Disch, High Volt. Chg, High Pres. Bulge, Bottom Ceramic Leak, Lost 25 gm.
			25°	404	1	153	Low Volt. Disch, High Volt. Chg, High Pres. Bulge, Bottom Ceramic Leak, Lost 25 gm
			25°	466	3	358	Low Volt. Disch, High Volt. Chg, High Pres. Bulge, Lost 16.4 gm
			25°	429	5	358	Low Volt. Disch, Low Volt. Chg, Ceramic Short Around Pos. Terminal

PACK NUMBER	DEPTH OF DISCHARGE (%)	TEST PERIOD (HOURS)	TEST TEMPERATURE (°)	CELL NUMBER	POSITION IN PACK	COMPLETION CYCLES	FAILURE ANALYSIS	CELL TYPE: Gulton 20 Ampere Hour
								GULTON 20 AMPERE HOUR
90	25%	1.5	40°	452	4	2824	Low Volt. Disch., Low Volt. Chg., Short Through Separator at Top of Plates, High Pres. Bulge on Sides, High Pres., Separator Deteriorated	
101	15%	1.5	40°	457	5	2824	Low Volt. Disch., Normal Volt. Chg., Short Through Separator, Blistering on Pos. Plate, High Pres. Bulge on Sides, High Pres.	
102	15%	3.0	0°	435	2	3111	Low Volt. Disch., High Volt. Chg., Leaked, Lost 24.6 gm., High Pres. Bulge, Separator Very Dry	
115	25%	1.5	0°	407	5	3111	Low Volt. Disch., High Volt. Chg., Leaked, Lost 20.4 gm., Separator Very Dry	
				438	4	3631	Low Volt. Disch., High Volt. Chg., Leaked, Lost 13.2 gm., High Pres. Bulge, Sides Concaved, Blistering on Pos Plates	
				449	2	135	Volt. Fell Suddenly at End of Chg., Burn Spots at Busses, Concave Around Spots, End Neg. Pushed Into Pos. Tab	
				490	3	2108	Low Volt. Disch., Normal Volt. Chg., Walls Concave, Busses Shorted to Case, Lost 26.9 gm.	
				508	2	2203	High Pres. Bulge, Blisters on Pos. Plate, Busses Shorted to Case	
				467	4	2291	Black Deposit on Outside of Neg. Terminal, High Pres. Bulge, Busses Shorted to Case, Blisters on Pos. Plate, Burnt Spot on Separator	

CELL TYPE: Gould 20 Ampere-Hour							
PACK NUMBER	DEPTH OF DISCHARGE (%)	ORBIT PERIOD (HOURS)	TEST TEMPERATURE (°C)	CELL NUMBER	POSITION IN PACK	CYCLES	FAILURE ANALYSIS
104	25%	1.5	25°	69	1	2672	Low Volt. Disch, Low Volt. Chg, Shorted at Bottom of Pos. Plate, Pos. Grid Wire Penetrated Separator, Short at Top Between Pos. Grid and Neg. Tab, High Pressure
				R36	5	2826	Low Volt. Disch, Low Volt. Chg, Short Between Plates, Grid Wire Penetrated Separator, Pos. Plate Material Between Plates, High Pressure
			25°		5	3 2980*	Low Volt. Disch, Low Volt. Chg, Separator Completely Deteriorated, Short Between Plates, High Pressure
				61	2	1748	Low Volt. Disch, Low Volt. Chg, Short at Bottom of Pos. Plate, Grid Wires Penetrated Separator Where Tape Holds Plates Together, High Pressure
118	40%	1.5	25°	R91	4	1963	Low Volt. Disch, Low Volt. Chg, Shorted at Bottom Corner of Pos. Plates, Grid Wires Through Separator, Rough Grid Showing Through at Top and Bottom of Most Plates, High Pressure
					92	5 2937	Low Volt. Disch, Low Volt. Chg, Short Through Separator on Side of Plates, Pos. Plate Material Penetrated Separator, High Pressure
			25°			5 222	Normal Volt. Disch, Low Volt. Chg, Short Near Bottom of 5th or 6th Pos., No Obvious Cause
119	40%	3.0	25°	73	5	2 1794*	Low Volt. Disch, Normal Volt. Chg, Neg. Plate Material Penetrated Separator, High Pressure, Blistering on Pos. Plate
					80	2 1794*	Low Volt. Disch, Normal Volt. Chg, Neg. Plate Material Penetrated Separator, High Pressure, Blistering on Pos. Plate
			25°		86	3	Low Volt. Disch, Normal Volt. Chg, Neg. Plate Material Penetrated Separator, High Pressure, Blistering on Pos. Plate

PACK NUMBER	DEPTH OF DISCHARGE (%)	DURATION PERIOD (HOURS)	BEST TEMPERATURE	CELL NUMBER	POSITION IN PACK	CYCLES COMPLETED	CELL TYPE: Gould 20 Ampere-Hour	FAILURE ANALYSIS
122	25%	3.0	40°	16	2	801		Low Volt. Disch, Low Volt. Chg, Blistering on Pos. Plates, Separator Deteriorated, Plate Material on Both Sides of Separator, High Pressure
126	25%	1.5	40°	58	3	801		Low Volt. Disch, Low Volt. Chg, Blistering on Pos. Plates, Separator Deteriorated, Plate Material on Both Sides of Separator, High Pressure
						983		Low Volt. Disch, Low Volt. Chg, Plate Material Penetrated Separator, Pos. Plates Blistered, High Pressure
						1273		Low Volt. Disch, Low Volt. Chg, Shorted at Bottom Corner of Neg. Plate, Grid Wire Penetrated Separator, Several Other Plates Had Grid Wires Sticking Out, High Pressure
						1509		Low Volt. Disch, Low Volt. Chg, Shorted at Bottom Corner of Pos. Plate, Grid Wire Penetrated Separator, Blistering on Pos. Plates, Separator Deteriorated, High Pressure
						1569		Low Volt. Disch, Low Volt. Chg, Shorted on Side of Pos. Plate, Grid Wire Penetrated Separator, High Pressure

CELL TYPE: Yardney 10 x YS-12							
PACK NUMBER	DEPTH OF DISCHARGE (%)	ORBIT PERIOD (HOURS)	TEST TEMPERATURE (DEGREES CELSIUS)	CELL NUMBER	POSTTEST POSITION IN PACK	NUMBER CYCLES COMPLETED	FAILURE ANALYSIS
							Failure Type
33	50%	24	40°	3	58	Leaked, Dried Out	Leaked, Dried Out
			40°	2	126	Leaked, Dried Out	Leaked, Dried Out
			40°	1	152	Leaked, Dried Out	Leaked, Dried Out
			40°	8	197	Leaked, Dried Out	Leaked, Dried Out
			40°	4	210	Leaked, Dried Out	Leaked, Dried Out
			40°	10	210	Leaked, Dried Out	Leaked, Dried Out
			40°	1	162	Leaked, Electrolyte Shorted Out Cell	Leaked, Electrolyte Shorted Out Cell
			0°	2	162	Leaked, Electrolyte Shorted Out Cell	Leaked, Electrolyte Shorted Out Cell
			0°	10	162	Leaked, Electrolyte Shorted Out Cell	Leaked, Electrolyte Shorted Out Cell
			0°	3	166	Leaked, Electrolyte Shorted Out Cell	Leaked, Electrolyte Shorted Out Cell
			0°	4	166	Leaked, Electrolyte Shorted Out Cell	Leaked, Electrolyte Shorted Out Cell
			0°	5	166	Leaked, Electrolyte Shorted Out Cell	Leaked, Electrolyte Shorted Out Cell
			0°	6	166	Leaked, Electrolyte Shorted Out Cell	Leaked, Electrolyte Shorted Out Cell
			0°	7	166	Leaked, Electrolyte Shorted Out Cell	Leaked, Electrolyte Shorted Out Cell
			0°	8	166	Leaked, Electrolyte Shorted Out Cell	Leaked, Electrolyte Shorted Out Cell
			0°	9	166	Leaked, Electrolyte Shorted Out Cell	Leaked, Electrolyte Shorted Out Cell

CELL TYPE:	Delco		
FAILURE ANALYSIS	Cell Blew-up, Pack Returned to Manufacturer		
CYCLES COMPLETED	30		
POSITION IN PACK			
CELL NUMBER			
TEST TEMPERATURE	25°		
ORBIT PERIOD (HOURS)	24		
DEPTH OF DISCHARGE	40%		
PACK NUMBER	75		

2.3

AMPERE-HOUR CAPACITIES ON
PRECONDITIONING CYCLES AND CAPACITY CHECKS

TYPE	DEPTH OF DISCHARGE	TEMP. °C.	ORBIT PERIOD	DISCHARGE AMPERE-HOURS*						
				(1)	(2)	(3)	(4)	(5)	(6)	(7)
G.E. 3 A.H.	15	0	90 Min	3.48		3.18	3.12	3.05		
	25	0		3.50		3.33	3.70	3.38		
	25	25		4.00		3.38	2.93	2.33		
	40	25		4.08		2.75	2.10	1.33		
	15	50/40		1.65	2.43 (779)	2.10	1.53	1.25		
	25	50/40		1.80	2.50 (1440)	0.88 **	0.88	PACK FAILED: CYCLE 2509		
G.E. 3 A.H.	15	0	3 Hrs	3.63		3.25	3.40	3.53		
	25	0		3.50		3.35	3.53	3.40		
	25	25		3.93		3.78	3.48	3.15		
	40	25		3.78		3.00	2.35	2.07		
	15	50/40		1.77	2.63 (320)	2.20	1.61	1.65		
	25	50/40		1.60	2.00 (367)	1.35	1.19	1.15		
Gould 3.5 A.H.	15	0	90 Min	3.62		4.00	3.33	3.41		
	25	0		3.33		3.85	3.53	3.18		
	25	25		4.00		3.82	3.92	2.35		
	40	25		3.94		3.38	2.77	PACK FAILED: CYCLE 3164		
	15	50/40		1.52	2.63 (779)	2.07	1.95	1.90		
	25	50/40		1.55	2.07 (424)	2.95	PACK FAILED: CYCLE 1811			
Gould 3.5 A.H.	15	0	3 Hrs	3.27		3.59	3.15	3.38		
	25	0		3.50		3.91	3.53	3.65		
	25	25		4.32		4.03	3.79	3.53		
	40	25		4.29		3.68	3.35	3.03		
	15	50/40		1.60	1.31 (328)	1.75	1.98	2.16		
	25	50/40		1.55	1.66 (495)	1.49	PACK FAILED: CYCLE 975			
Sonotone 5 A.H.	15	0	90 Min	5.45		5.54	5.50	4.96		
	25	0		5.04		4.96	4.58	4.25		
	25	25		5.42		3.67	2.33	2.28		
	40	25		6.42		4.38	4.17	3.25		
	15	50/40		3.08	3.63 (703)	2.25	1.83	2.04		
	25	50/40		3.17	3.17 (445)	2.75	2.93	FAILED: CYCLE 3625		
Sonotone 5 A.H.	15	0	3 Hrs	5.67		5.79	5.67	5.42		
	25	0		4.92		3.96	3.96	4.13		
	25	25		5.71		4.58	3.04	2.04		
	40	25		5.83		4.50	3.29	3.25		
	15	50/40		3.33	4.92 (223)	2.75	2.38			
	25	50/40		3.75	3.50 (183)	1.88	2.88			

* (1) Initial Preconditioning.

(2) Preconditioning at Change to 40° C. Number of cycles completed at 50° C. is in parentheses.

(3) Capacity check after First 88 days of cycling. (** Still at 50° C.)

(4) Capacity check after Second 88 days.

(5) Capacity check after Third 88 days.

(6) Capacity check after Fourth 88 days.

(7) Capacity check after Fifth 88 days. *AV*

AMPERE-HOUR CAPACITIES ON
PRECONDITIONING CYCLES AND CAPACITY CHECKS

TYPE	PERCENT DEPTH OF DISCHARGE	TEMP. °C.	ORBIT PERIOD	DISCHARGE AMPERE-HOURS*						
				(1)	(2)	(3)	(4)	(5)	(6)	(7)
Gulton 6 A.H.	15	0	90 Min	5.00		5.10	5.40	4.45		
	25	0		5.00		4.75	3.80	4.35		
	25	25		5.80		2.75	2.85	2.70		
	40	25		6.40		3.45	PACK FAILED:	CYCLE	2086	
	15	50/40		2.75	3.60 (239)	1.70	2.95	1.85		
	25	50/40		2.65	2.90 (114)	1.55	PACK FAILED:	CYCLE	1377	
Gulton 6 A.H.	15	0	3 Hrs	4.50		5.45	5.35	5.15		
	25	0		4.25		5.00	3.50	2.50		
	25	25		5.80		3.65	3.45	2.50		
	40	25		4.55		4.95	3.16	PACK FAILED: CYCLE	1550	
	15	50/40		2.75	4.55 (239)	2.05	1.63	PACK FAILED: CYCLE	1689	
	25	50/40		2.60	3.80 (96)	2.15	2.10			
G.E. 12 A.H.	15	0	90 Min	13.9		12.7	10.4	13.0		
	25	0		14.2		13.5	12.9	11.9		
	25	25		15.2		8.00	5.55	5.50		
	40	25		14.8		6.00	7.65	PACK FAILED: CYCLE	4020	
	15	50/40		6.80	8.20 (324)	5.00	4.70			
	25	50/40		6.90	6.00 (195)	4.90	5.20			
G.E. 12 A.H.	15	0	3 Hrs	14.2		13.2	10.7	11.0		
	25	0		14.6		13.0	12.1			
	25	25		15.2		11.7	8.20	6.13		
	40	25		14.9		5.60	5.86	7.90		
	15	50/40		7.10	8.20 (205)	6.30	3.70			
	25	50/40		7.00	9.80 (70)	3.80	4.70			
Gould 20 A.H.	15	0	90 Min	22.5		27.7	26.5	24.2		
	25	0		23.0		21.2	15.2	12.7		
	25	25		25.0		18.5	14.0	PACK FAILED: CYCLE	2980	
	40	25		24.7		23.3	PACK FAILED: CYCLE	2987		
	15	50/40		9.67	6.83 (183)	15.7	15.3			
	25	50/40		9.00	13.9 (1826)	15.2	PACK FAILED: CYCLE	1574		
Gould 20 A.H.	15	0	3 Hrs	23.0		23.2	21.5			
	25	0		23.0		17.5	25.0			
	25	25		23.3		22.5	22.2			
	40	25		24.8		24.7	21.7	PACK FAILED: CYCLE	1793	
	15	50/40		9.50	9.67 (47)	11.8	14.8			
	25	50/40		9.33	7.50 (756)	8.17 **	PACK FAILED:	CYCLE	483	

- * (1) Initial Preconditioning.
- (2) Preconditioning at Change to 40° C. Number of cycles completed at 50° C. is in parentheses.
- (3) Capacity check after First 88 days of cycling. (** Still at 50° C.)
- (4) Capacity check after Second 88 days.
- (5) Capacity check after Third 88 days.
- (6) Capacity check after Fourth 88 days.
- (7) Capacity check after Fifth 88 days. 2.5.

AMPERE-HOUR CAPACITIES ON
PRECONDITIONING CYCLES AND CAPACITY CHECKS

TYPE	PERCENT DEPTH OF DISCHARGE	TEMP. °C.	ORBIT PERIOD	DISCHARGE AMPERE-HOURS*						
				(1)	(2)	(3)	(4)	(5)	(6)	(7)
Gulton 20 A.H.	15	0	90 Min	17.2		12.5	5.67	PACK FAILED: CYCLE 3631		
	25	0		17.7		11.2	PACK FAILED: CYCLE 2288			
	25	25		23.3		7.17	9.50	7.83		
	40	25		23.3	PACK FAILED: CYCLE 627					
	15	50/40		10.3	13.8 (172)	6.50	4.83			
	25	50/40		9.00	11.3 (65)	6.00	10.3			
Gulton 20 A.H.	15	0	3 Hrs	16.7		18.8	25.2			
	25	0		21.7		20.7	21.8			
	25	25		20.3		6.17	7.17	PACK FAILED: CYCLE 1754		
	40	25		19.8	PACK FAILED: CYCLE 358					
	15	50/40		9.50	12.7 (71)	7.33	5.33			
	25	50/40		9.17	10.3 (47)	6.67	6.67			
Yardney 12 A.H.	50	0	24 Hrs	13.8		8.60	PACK FAILED: CYCLE 166			
	50	40		13.5		12.0	PACK FAILED: CYCLE 210			
Gulton 6 A.H.	50	25	24 Hrs	6.60		3.55				
G.E. 12 A.H.	50	25	24 Hrs	13.0		7.60				

* (1) Initial Preconditioning.

(2) Preconditioning at Change to 40° C. Number of cycles completed at 50° C. is in parentheses.

(3) Capacity check after First 88 days of cycling.

(4) Capacity check after Second 88 days.

(5) Capacity check after Third 88 days.

(6) Capacity check after Fourth 88 days.

(7) Capacity check after Fifth 88 days.

31 OCTOBER 1964

MFR.	CAPACITY A. H.	PACK NO.	TEMP. °C.	ORBIT PERIOD (HRS)		DEPTH OF DISCHARGE	PERCENT OF RECHARGE	CHARGE VOLTAGE LIMIT	CYCLES COVERED		CELLS REMAIN- ING IN PACK FINAL
				INITIAL	FINAL				DIFFERENCE	INITIAL	
G.E.	63	0	0.5	1.0	1.5	1.5	1.55	4.462	4780	518	10
	64	0	"	"	25	"	"	44.39	4961	522	10
	65	0	"	"	25	125	1.49	4.573	5023	510	10
	66	0	"	"	40	"	"	44.66	4917	451	9
	67	0	"	"	15	160	1.45	4170	4690	530	7
	68	0	"	"	25	"	1.41	—	more	more	—
	69	0	"	"	2.5	15	1.55	2110	2378	265	10
	70	0	"	"	25	"	"	2100	2144	245	10
	71	0	"	"	25	"	1.49	12	2386	262	10
	72	0	"	"	15	125	1.45	2073	2144	264	10
Gould	73	0	"	"	40	"	"	2073	2144	264	10
	74	0	"	"	15	160	1.45	1966	2202	243	7
	75	0	"	"	25	"	"	1914	2110	236	9
	76	0	"	"	25	"	1.55	46324	50325	510	10
	77	0	"	"	40	"	"	4519	5041	522	10
	78	0	"	"	25	125	1.49	4292	4918	426	7
	79	0	"	"	15	160	1.45	4053	4675	322	6
	80	0	"	"	25	"	"	—	—	—	—
	81	0	"	"	15	"	"	—	—	—	—
	82	0	"	"	25	"	"	2110	2378	268	10

MFR.	CAPACITY A.H.	PACK NO.	TEMP. °C.	ORBIT PERIOD (HRS)		DEPTH OF DISCHARGE	PERCENT OF RECHARGE	CHARGE VOLTAGE LIMIT	CYCLES COVERED		CELLS REMAIN- ING IN PACK
				DISCHARGE	CHARGE				INITIAL	FINAL	
Sonotone	49	0	0.5	1.0	1.5	1.15	1.65	4.241	4759	518	9
	50	0	"	25	"	"	"	4199	4717	518	10
	1	25	"	25	1.25	1.19	4142	4605	461	9	8
	2	25	"	40	"	"	"	4261	4698	435	8
	25	10	"	1.5	1.60	1.75	41688	4559	470	10	10
	26	10	"	25	"	"	"	3447	3625	178	5
	53	0	"	0.5	1.5	1.15	1.55	1977	2530	221	10
	54	0	"	25	"	"	"	1976	3250	274	10
	5	25	"	25	1.25	1.19	2037	2277	240	10	10
	6	25	"	40	"	"	"	1958	243	7	7
Gulton	29	10	"	1.5	1.60	1.45	1.896	2163	267	9	9
	30	10	"	25	"	"	"	1840	2188	268	9
	61	0	"	1.0	1.5	1.15	1.55	3919	4372	4153	9
	62	0	"	25	"	"	"	3971	4400	429	9
	13	25	"	25	1.25	1.19	1.19	3397	3879	482	6
	14	25	"	40	"	"	"	—	—	—	—
	39	40	"	15	1.60	1.45	1.45	3291	3608	517	6
	38	40	"	25	"	"	"	—	—	—	—
	65	0	"	2.5	15	1.15	1.55	2111	2352	241	10
	66	0	"	25	"	"	"	1903	2122	219	6
	17	25	"	25	1.25	1.49	1989	2227	240	7	7
	18	25	"	40	"	"	"	—	—	—	—
	41	40	"	15	1.60	1.45	1.45	—	—	—	—
	42	40	"	25	"	"	"	1660	1928	268	6

MFR.	CAPACITY A. H.	PACK NO.	TEMP. °C.	ORBIT DISCHARGE	PERIOD (HRS.) CHARGE	DEPTH OF DISCHARGE	PERCENT OF RECHARGE	CHARGE VOLTAGE LIMIT	CYCLES COVERED		CELLS REMAIN- ING IN PACK
									INITIAL	FINAL	
	110	0	0.5	1.0	15	115	1.55	3920	4337	419	5
124	0	"	"	"	25	"	"	3884	4230	354	4
82	25	"	"	"	25	125	1.49	4116	4535	419	5
96	25	"	"	"	40	"	"	3964	4020	56	4
85	40	"	"	"	15	160	1.45	3777	4298	522	5
99	40	"	"	"	25	"	"	3590	3841	251	4
G. E.	111	0	"	2.5	15	115	1.55	1972	2175	243	5
125	0	"	"	"	25	"	"	1980	2174	234	5
83	25	"	"	"	25	125	1.49	2013	2256	243	5
97	25	"	"	"	40	"	"	2002	2246	243	5
86	40	"	"	"	15	160	1.45	1924	2172	243	5
100	40	"	"	"	25	"	"	1921	2039	243	5
84	0	"	1.0	15	115	1.55	3858	4377	519	5	5
98	0	"	"	25	"	"	"	3665	4184	519	4
104	25	"	"	25	125	1.49	—	—	—	—	—
118	25	"	"	40	"	"	"	—	—	—	—
112	40	"	"	15	160	1.45	3628	4149	519	5	5
126	50	"	"	25	"	141	—	—	—	—	—
Gould	80	0	"	2.5	15	115	1.55	1919	2186	262	5
94	0	"	"	25	"	"	"	1790	2057	267	5
105	35	"	"	25	125	1.49	1834	2132	268	5	5
119	35	"	"	40	"	"	"	1780	1993	13	4
108	40	"	"	15	160	1.45	1949	2016	267	5	5
122	50	"	"	25	"	141	1.41	—	—	—	—

MFR	CAPACITY A. H.	PACK NO.	TEMP. °C.	ORBIT PERIOD (HRS)		DEPTH OF DISCHARGE	PERCENT OF RECHARGE	CHARGE VOLTAGE LIMIT	CYCLES COVERED		CELLS REMAIN- ING IN PACK INITIAL FINAL
				DISCHARGE	CHARGE				INITIAL	FINAL	
ARGONY	12	57	0	1.0	23.0	50	*	1.50	SECURED	—	—
		33	40	"	"	"	*	1.50	—	—	—
FULTON	6	79	25	1.0	23.0	50	200	1.49	177	208	31 3 3
G.E.	12	93	25*	1.0	23.0	50	200	1.49*	177	207	30 5 .5
		173	10	0.5	1.0	25	115	1.55	162	214.6	52.3 5 5
DELCO	25	95	0	"	"	15	160	1.45	135.8	178.3	42.5 5 5
		89	25	1.0	23.0	40	*	1.97	—	—	—

* DOES NOT APPLY
** CHANGED TO 40°C, 1.45 V/CELL LIMIT AFTER CYCLE 173.

END OF DISCHARGE

END OF CHARGE

89

PACK NO. 16
G. E.
MFR.

DEPTH OF DISCHARGE: 40 % TEST TEMPERATURE: 25 °C
PERCENT OF RECHARGE: 125 % ORBIT PERIOD: 90 MINUTES

PACITY 3 A.H.

PERCENT OF RECHARGE: 125% ORBIT PERIOD: 90 MINUTES

END OF THIS PAGE

2141	15.43	1.2	1.56	1.46	1.51	1.56	1.57	1.55	1.55
2209	15.57	.99	1.61	1.46	1.53	1.61	1.59	1.59	1.59
2239	15.26	.11	1.61	1.45	1.52	1.61	1.56	1.56	1.56
2239	15.26	.11	1.61	1.45	1.52	1.61	1.56	1.56	1.56
2267	15.47	1.02	1.53	1.49	1.48	1.60	1.53	1.53	1.53
2295	15.42	.10	1.57	1.44	1.44	1.58	1.53	1.53	1.53
2354	15.28	.09	1.59	1.43	1.47	1.57	1.57	1.53	1.51
2378	15.60	.11	1.59	1.42	1.43	1.59	1.59	1.59	1.59

PACK NO. 19
MFR. G.E.

DEPTH OF DISCHARGE: 50%
CAPACITY 3 A.H. PERCENT OF RECHARGE: 125%

TEST TEMPERATURE: 25°C
ORBIT PERIOD: 3 HOURS

CYCLE NO.	PACK VOLTAGE	PACK CURRENT	1.50	1	2	3	4	5	6	7	8	9	10
21112	12.15	1.53	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
21111	12.16	1.51	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
22447	12.16	1.52	1.20	1.21	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
22445	12.12	1.51	1.21	1.21	1.20	1.21	1.20	1.20	1.20	1.20	1.20	1.20	1.20
23033	12.13	1.51	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
23624	12.10	1.51	1.21	1.20	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
2386	12.09	1.51	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21

CYCLE NO.	PACK VOLTAGE	PACK CURRENT	1.45	1.44	1.44	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
21419	14.63	1.37	1.44	1.44	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
21411	14.61	1.37	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44
22449	14.65	1.37	1.45	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44
21416	14.74	1.37	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
23033	14.72	1.37	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
23624	14.74	1.37	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
2386	14.72	1.37	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45

CYCLE NO.	PACK VOLTAGE	PACK CURRENT	1.40	1.39	1.39	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40
21107	11.23	2.40	1.10	1.12	1.12	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
21440	11.30	2.40	1.14	1.12	1.13	1.11	1.11	1.13	1.13	1.10	1.11	1.15	1.12
2168	11.41	2.41	1.13	1.12	1.12	1.11	1.11	1.13	1.13	1.12	1.12	1.13	1.12
2202	11.29	2.41	1.14	1.12	1.13	1.11	1.11	1.12	1.10	1.10	1.15	1.11	1.11
2232	11.36	2.41	1.15	1.13	1.13	1.12	1.11	1.11	1.14	1.12	1.15	1.12	1.12
2244	11.15	2.41	1.14	1.11	1.12	1.10	1.09	1.12	1.10	1.09	1.15	1.11	1.11
2312	11.09	2.39	1.13	1.10	1.11	1.09	1.09	1.12	1.10	1.09	1.09	1.11	1.11
2341	11.38	2.41	1.15	1.13	1.14	1.13	1.13	1.12	1.14	1.13	1.12	1.15	1.12
2407	14.62	1.52	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44
21440	14.60	1.52	1.46	1.45	1.45	1.44	1.44	1.45	1.44	1.45	1.45	1.45	1.45
2168	14.61	1.60	1.45	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43
2202	14.70	1.60	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47
2230	14.71	1.60	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47
2258	14.70	1.59	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48
2317	14.80	1.60	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
2341	14.79	1.60	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47

PACK NO. 463		CAPACITY 3 A.H.		DEPTH OF DISCHARGE: 15 %		TEST TEMPERATURE: 40°C	
MFR.	G.E.	PERCENT OF RECHARGE: 160 %		ORBIT PERIOD: 3 HOURS			
CYCLE NO.	PACK NO.	CELL VOLTAGES:					
		VOLTAGE	CURRENT	1	2	3	4
1/20.5	463	8.34	.90	1.22	1.21	—	—
2/20.5	463	8.31	.90	1.21	1.21	—	—
2/20.5	463	8.30	.90	1.21	1.21	—	—
2/20.5	463	8.28	.90	1.21	1.21	—	—
2/20.5	463	8.28	.90	1.22	1.22	—	—
2/20.5	463	8.25	.90	1.22	1.22	—	—
2/20.5	463	8.20	.90	1.21	1.21	—	—
END OF DISCHARGE							

END OF CHARGE	1027	9.91	1.23	1.36	1.32	—	1.34	1.34	1.34	1.34	1.34	1.34
2029	9.96	2.1	1.40	1.40	—	—	1.40	—	1.40	—	1.40	—
9095	9.93	1.29	1.40	1.40	1.40	—	1.40	—	1.40	—	1.40	—
2151	9.96	1.28	1.40	1.41	—	—	1.40	—	1.40	—	1.40	—
2155	9.95	1.38	1.40	1.40	—	—	1.40	—	1.40	—	1.40	—
2209	9.95	2.9	1.40	1.40	—	—	1.40	—	1.40	—	1.40	—

PACK NO.	MFR. C.R.	CAPACITY	A.H.	DEPTH OF DISCHARGE: 25% PERCENT OF RECHARGE: 160%			TEST TEMPERATURE: 44°C	ORBIT PERIOD: 3 HOURS	END OF DISCHARGE
				1.11	1.14	1.17			
1943	10.14	1.50	1.11	1.14	1.17	1.17	—	—	—
1981	10.22	1.51	1.12	1.15	1.13	1.14	—	—	—
2009	10.28	1.51	1.12	1.14	1.13	1.14	—	—	—
2043	10.23	1.51	1.12	1.14	1.15	1.16	—	—	—
2116	10.19	1.51	1.12	1.15	1.14	1.14	—	—	—
2140	10.32	1.50	1.14	1.16	1.15	1.15	—	—	—

END OF CHARGE	1.948	1.951	1.953	1.954	1.955	1.956	—	1.957	1.958	1.959	1.960
1.951	1.951	1.951	1.951	1.951	1.951	1.951	—	1.951	1.951	1.951	1.951
1.952	1.952	1.952	1.952	1.952	1.952	1.952	—	1.952	1.952	1.952	1.952
1.953	1.953	1.953	1.953	1.953	1.953	1.953	—	1.953	1.953	1.953	1.953
1.954	1.954	1.954	1.954	1.954	1.954	1.954	—	1.954	1.954	1.954	1.954
1.955	1.955	1.955	1.955	1.955	1.955	1.955	—	1.955	1.955	1.955	1.955
1.956	1.956	1.956	1.956	1.956	1.956	1.956	—	1.956	1.956	1.956	1.956
1.957	1.957	1.957	1.957	1.957	1.957	1.957	—	1.957	1.957	1.957	1.957
1.958	1.958	1.958	1.958	1.958	1.958	1.958	—	1.958	1.958	1.958	1.958
1.959	1.959	1.959	1.959	1.959	1.959	1.959	—	1.959	1.959	1.959	1.959
1.960	1.960	1.960	1.960	1.960	1.960	1.960	—	1.960	1.960	1.960	1.960

PACK NO. 52
MFR. GOMA D

CAPACITY 5 A.H.

DEPTH OF DISCHARGE: 25%	TEST TEMPERATURE: 0°C
PERCENT OF RECHARGE: 15%	ORBIT PERIOD: 90 MINUTES

TEST TEMPERATURE: 60°
DEPTH OF DISCHARGE: 25% ORKUT PERIOD: 90 MINUTES
PERCENT OF RECHARGE: 115%

END OF DISCHARGE

PACK NO. 555 MFR. G.C.U.D.			DEPTH OF DISCHARGE: 115 % PERCENT OF RECHARGE: 115 %			TEST TEMPERATURE: 0°C ORBIT PERIOD: 3 HOURS						
CYCLE NO.	PACK VOLTAGE	PACK CURRENT	1.05	2	3	4	5	6	7	8	9	10
2141	1.554	1.06	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
2203	1.546	1.06	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
2239	1.546	1.02	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
2267	1.542	1.06	1.23	1.24	1.24	1.24	1.24	1.23	1.23	1.24	1.23	1.23
2295	1.539	1.06	1.24	1.24	1.24	1.24	1.24	1.23	1.23	1.24	1.23	1.23
2354	1.540	1.06	1.24	1.24	1.24	1.24	1.24	1.23	1.23	1.24	1.23	1.23
END OF 2378	1.541	1.07	1.25	1.25	1.25	1.25	1.25	1.24	1.24	1.25	1.24	1.24
<hr/>												
2141	1.554	1.23	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52
2203	1.539	1.24	1.53	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52
2239	1.534	1.24	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52
2267	1.534	1.23	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53
2295	1.533	1.23	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53
2354	1.538	1.24	1.54	1.53	1.54	1.54	1.54	1.53	1.53	1.54	1.53	1.53
END OF 2378	1.533	1.24	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53
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PACK NO. 556 MFR. G.C.U.D.	1.75	CAPACITY 3.5 A.H.	DEPTH OF DISCHARGE: 115 % PERCENT OF RECHARGE: 115 %	TEST TEMPERATURE: 25 °C ORBIT PERIOD: 3 HOURS	1.19	1.20	1.20	1.20	1.20	1.20	1.20	1.20
2127	1.217	1.76	1.20	1.21	1.21	1.21	1.21	1.20	1.20	1.20	1.20	1.20
2160	1.217	1.76	1.21	1.21	1.21	1.21	1.21	1.20	1.20	1.20	1.20	1.20
2183	1.212	1.77	1.19	1.20	1.20	1.20	1.20	1.19	1.19	1.19	1.19	1.19
2222	1.213	1.77	1.20	1.21	1.21	1.21	1.21	1.20	1.20	1.20	1.20	1.20
2255	1.215	1.77	1.20	1.21	1.21	1.21	1.21	1.20	1.20	1.20	1.20	1.20
2278	1.208	1.77	1.20	1.21	1.21	1.21	1.21	1.20	1.20	1.20	1.20	1.20
2339	1.204	1.76	1.20	1.20	1.20	1.20	1.20	1.19	1.19	1.20	1.20	1.20
2361	1.210	1.77	1.21	1.21	1.21	1.21	1.21	1.20	1.20	1.21	1.21	1.21
END OF 2379	1.212	1.76	1.53	1.53	1.53	1.53	1.53	1.52	1.52	1.52	1.52	1.52
2160	1.547	1.36	1.54	1.55	1.55	1.55	1.55	1.54	1.54	1.55	1.55	1.55
2183	1.546	1.38	1.55	1.53	1.54	1.54	1.54	1.52	1.52	1.54	1.52	1.52
2222	1.541	1.36	1.53	1.53	1.54	1.54	1.54	1.52	1.52	1.54	1.52	1.52
2255	1.541	1.36	1.54	1.54	1.55	1.55	1.55	1.53	1.53	1.55	1.52	1.52
2278	1.547	1.36	1.54	1.54	1.55	1.55	1.55	1.54	1.54	1.55	1.53	1.53
2339	1.543	1.34	1.54	1.54	1.54	1.54	1.54	1.53	1.53	1.55	1.52	1.52
END OF 2361	1.542	1.38	1.52	1.53	1.53	1.53	1.53	1.52	1.52	1.54	1.52	1.52

PACK NO. 7
MFR. G-CU-LD CAPACITY 3.5 A.H. DEPTH OF DISCHARGE: 25 % PERCENT OF RECHARGE: 12.5 % TEST TEMPERATURE: 25 °C.

CYCLE NO.	PACK VOL/TAGE	PACK CURRENT	1.75	1	2	3	4	5	6	7	8	9	10
2145	12.06	1.22	1.19	1.18	1.17	1.20	1.22	1.24	1.26	1.28	1.30	1.32	1.34
2209	12.08	1.76	1.19	1.21	1.21	1.21	1.20	1.20	1.20	1.20	1.20	1.20	1.20
2245	12.04	1.76	1.18	1.16	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
2273	12.01	1.75	1.19	1.16	1.21	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
2301	12.02	1.77	1.19	1.16	1.21	1.21	1.20	1.20	1.20	1.20	1.20	1.20	1.20
2360	11.95	1.77	1.18	1.14	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
2384	11.91	1.78	1.18	1.13	1.20	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19

EEND OF CHARGE	END OF DISCHARGE	END OF CHARGE	END OF DISCHARGE										
3147	14.62	1.43	1.44	1.45	1.45	1.44	1.44	1.45	1.45	1.45	1.45	1.45	1.45
2209	14.63	1.43	1.45	1.45	1.45	1.44	1.44	1.45	1.45	1.45	1.45	1.45	1.45
2245	14.58	1.43	1.44	1.45	1.45	1.44	1.44	1.45	1.45	1.45	1.45	1.45	1.45
2273	14.61	1.43	1.45	1.45	1.45	1.44	1.44	1.45	1.45	1.45	1.45	1.45	1.45
2301	14.54	1.43	1.45	1.45	1.45	1.44	1.44	1.45	1.45	1.45	1.45	1.45	1.45
2360	14.63	1.41	1.45	1.45	1.46	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
2384	14.61	1.39	1.45	1.45	1.46	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45

EEND OF CHARGE	END OF DISCHARGE	END OF CHARGE	END OF DISCHARGE											
2155	11.89	2.53	—	1.14	1.16	1.18	1.17	—	—	—	—	—	—	—
2085	11.72	2.49	—	1.15	1.16	1.17	1.16	—	—	—	—	—	—	—
2111	12.36	2.85	—	1.11	1.13	1.14	1.13	—	—	—	—	—	—	—
2122	12.20	2.83	—	1.11	1.14	1.14	1.13	—	—	—	—	—	—	—
2133	11.00	2.82	—	1.11	1.14	1.14	1.14	—	—	—	—	—	—	—
2156	5.75	2.81	—	1.12	1.15	1.16	1.16	—	—	—	—	—	—	—
2184	5.66	2.91	—	1.10	1.14	1.14	1.14	—	—	—	—	—	—	—
2243	5.60	2.74	—	1.08	1.14	1.13	1.13	—	—	—	—	—	—	—
2253	5.59	2.73	—	1.06	1.16	1.16	1.16	—	—	—	—	—	—	—
2263	5.42	2.93	—	1.45	1.46	1.45	1.45	—	—	—	—	—	—	—
2113	8.76	2.75	—	1.42	1.45	1.45	1.45	—	—	—	—	—	—	—
2125	8.91	2.93	—	1.46	1.46	1.47	1.47	—	—	—	—	—	—	—
2138	8.81	2.72	—	1.45	1.46	1.46	1.46	—	—	—	—	—	—	—
2156	4.38	2.95	—	1.46	1.47	1.48	1.47	—	—	—	—	—	—	—
2184	7.36	2.93	—	1.46	1.47	1.47	1.47	—	—	—	—	—	—	—
2243	7.38	2.73	—	1.45	1.48	1.49	1.49	—	—	—	—	—	—	—

PACK NO. 251
MFR. G.O.D. 0

DEPTH OF DISCHARGE: 15% TEST TEMPERATURE: 4°
 PERCENT OF RECHARGE: 150% ORBIT PERIOD: 3 HOURS

CELL VOLTAGES

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES							
			1	2	3	4	5	6	7	8
1967	8.05	1.06	1.16	—	1.08	1.21	1.24	1.21	1.08	—
2029	8.05	1.06	1.15	—	1.07	1.21	1.21	1.21	1.07	—
2065	8.03	1.07	1.15	—	1.03	1.22	1.19	1.15	1.22	—
2130	8.02	1.06	1.14	—	1.04	1.20	1.21	1.11	1.21	1.14

PACK NO. 215
MFR.

DEPTH OF DISCHARGE:	TEST TEMPERATURE:
PERCENT OF RECHARGE:	ORBIT PERIOD: 3 HOURS

PACK NO. 44
MFR. SOUTHERN

DEPTH OF DISCHARGE: /
PERCENT OF RECHARGE: /

DEPTH OF DISCHARGE: 1.5% TEST TEMPERATURE: 0°C
PERCENT OF RECHARGE: 1.5% ORBIT PERIOD: 90 MINUTES

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES							
			1	2	3	4	5	6	7	8
44292	10.93	1.57	1.20	1.20	1.19	1.19	1.19	1.19	1.19	1.19
44299	10.95	1.52	1.20	1.21	1.20	1.20	1.20	1.20	1.20	1.20
44305	10.97	1.53	1.21	1.21	1.20	1.20	1.20	1.20	1.20	1.20
44312	10.97	1.50	1.21	1.17	1.21	1.21	1.21	1.21	1.21	1.21
44319	10.99	1.50	1.21	1.21	1.20	1.20	1.20	1.20	1.20	1.20
44326	10.98	1.52	1.21	1.21	1.20	1.20	1.20	1.20	1.20	1.20
44430	10.98	1.53	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
44434	10.98	1.51	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
44437	10.93	1.51	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
44444	10.99	1.52	1.21	1.21	1.20	1.20	1.20	1.20	1.20	1.20
44451	11.01	1.50	1.21	1.21	1.20	1.20	1.20	1.20	1.20	1.20
44458	10.98	1.52	1.21	1.21	1.20	1.20	1.20	1.20	1.20	1.20
44465	11.01	1.51	1.22	1.21	1.20	1.20	1.20	1.20	1.20	1.20
44472	11.01	1.51	1.21	1.21	1.20	1.20	1.20	1.20	1.20	1.20
44479	10.98	1.51	1.21	1.21	1.20	1.20	1.20	1.20	1.20	1.20
44486	10.98	1.51	1.21	1.21	1.20	1.20	1.20	1.20	1.20	1.20
44493	10.91	1.53	1.20	1.20	1.19	1.19	1.19	1.19	1.19	1.19
44499	10.91	1.51	1.21	1.21	1.20	1.20	1.20	1.20	1.20	1.20

END OF MISCHARGE

END OF CHARGE

PACK NO. 50 MFR. SONY 7045		CAPACITY 5 A.H.		DEPTH OF DISCHARGE: 25 % PERCENT OF RECHARGE: 15 %		TEST TEMPERATURE: 0°C ORBIT PERIOD: 90 MINUTES							
CYCLE NO.	PACK VOLTAGE	PACK CURRENT	2.50	1	2	3	4	5	6	7	8	9	10
42-30	11.96	2.51	1.12	1.18	1.15	1.13	1.13	1.13	1.18	1.18	1.19	1.18	1.17
42-31	11.72	3.51	1.12	1.18	1.16	1.13	1.14	1.18	1.18	1.18	1.19	1.15	1.17
42-34	11.74	2.52	1.13	1.18	1.16	1.13	1.13	1.13	1.18	1.18	1.19	1.18	1.17
42-35	11.70	2.52	1.12	1.18	1.15	1.13	1.13	1.13	1.18	1.18	1.19	1.18	1.17
43-56	11.70	2.52	1.12	1.18	1.15	1.13	1.13	1.13	1.18	1.18	1.19	1.18	1.17
43-88	11.83	2.53	1.14	1.19	1.17	1.16	1.16	1.16	1.19	1.19	1.20	1.19	1.18
44-22	11.73	2.52	1.13	1.18	1.16	1.13	1.13	1.13	1.18	1.18	1.19	1.18	1.17
44-53	11.72	2.52	1.13	1.18	1.16	1.13	1.13	1.13	1.18	1.18	1.19	1.18	1.17
44-86	11.76	2.53	1.13	1.19	1.16	1.14	1.14	1.14	1.19	1.19	1.20	1.19	1.17
45-18	11.67	3.52	1.12	1.18	1.15	1.13	1.13	1.13	1.18	1.18	1.19	1.18	1.17
45-50	11.58	3.52	1.11	1.17	1.15	1.11	1.11	1.11	1.17	1.17	1.18	1.17	1.15
46-36	11.65	3.52	1.12	1.18	1.15	1.12	1.12	1.12	1.18	1.18	1.19	1.18	1.16
47-17	11.63	2.54	1.11	1.17	1.15	1.12	1.12	1.12	1.18	1.18	1.19	1.18	1.16
1.600													
42-30	15.61	1.88	1.58	1.49	1.56	1.55	1.57	1.57	1.49	1.49	1.56	1.49	1.46
42-57	16.00	.93	1.62	1.50	1.61	1.62	1.52	1.52	1.50	1.50	1.62	1.51	1.70
42-74	15.96	.84	1.60	1.51	1.59	1.58	1.60	1.57	1.50	1.50	1.51	1.68	
43-29	15.80	.84	1.60	1.50	1.59	1.58	1.58	1.55	1.49	1.50	1.51	1.65	
43-56	15.85	.90	1.61	1.51	1.58	1.58	1.60	1.59	1.50	1.50	1.51	1.60	
43-88	15.83	.85	1.61	1.49	1.60	1.58	1.58	1.58	1.56	1.56	1.59	1.51	
44-22	15.76	.91	1.59	1.50	1.58	1.57	1.59	1.55	1.49	1.49	1.57	1.51	1.67
44-53	15.73	1.14	1.57	1.48	1.55	1.55	1.56	1.56	1.51	1.51	1.54	1.49	1.54
44-86	15.80	.91	1.59	1.50	1.58	1.58	1.57	1.57	1.50	1.50	1.51	1.51	1.69
45-18	15.83	.89	1.60	1.51	1.59	1.58	1.58	1.58	1.57	1.57	1.60	1.52	1.69
46-36	15.79	.99	1.57	1.48	1.55	1.55	1.54	1.56	1.47	1.47	1.55	1.49	1.64
46-56	15.76	.91	1.54	1.48	1.55	1.55	1.54	1.54	1.47	1.47	1.54	1.49	1.65
47-17	15.25	1.65	1.54	1.46	1.53	1.52	1.51	1.51	1.46	1.46	1.54	1.49	1.60

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END OF MISCHARGE

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PACK NO. 25
MFR. SOUTHERN CAPACITY 5 A.H.
DEPTH OF DISCHARGE: 15%
PERCENT OF RECHARGE: 160%
TEST TEMPERATURE: 40°C
ORBIT PERIOD: 90 MINUTES

1/2 CAPACITY 5 A.H. PERCENT OF RECHARGE: 160% DE IN OF DISCHARGE: 1/3 % 1E31 INFLATION: 1E31 ORBIT PERIOD: 90 MINUTES

PACK NO. 53
MFR. SOUTON F.C. CAPACITY .5 A.H.

DEPTH OF DISCHARGE: 15%
PERCENT OF RECHARGE: 115% TEST TEMPERATURE: 0°C
ORBIT PERIOD: 3 HOURS

CYCLE NO.	PACK VOLTAGE	PACK CURRENT	CELL VOLTAGES						
			1	2	3	4	5	6	7
2010	12.38	1.52	1.21	1.32	1.23	1.24	1.25	1.23	1.24
2044	12.36	1.53	1.21	1.22	1.23	1.23	1.24	1.23	1.24
2082	12.45	1.51	1.22	1.23	1.24	1.24	1.24	1.24	1.23
2109	12.38	1.51	1.21	1.22	1.23	1.24	1.25	1.23	1.24
2139	12.34	1.51	1.21	1.22	1.23	1.24	1.23	1.23	1.23
2189	12.35	1.51	1.21	1.22	1.23	1.24	1.23	1.23	1.23
2220	12.28	1.51	1.20	1.22	1.23	1.23	1.23	1.23	1.23

END OF CHARGE	CELL VOLTAGES						TEST TEMPERATURE: 0°C				
	1	2	3	4	5	6					
2010	15.44	1.27	1.54	1.54	1.52	1.58	1.55	1.50	1.50	1.51	1.55
2044	15.68	1.27	1.54	1.54	1.52	1.56	1.54	1.50	1.55	1.57	1.64
2082	15.88	1.23	1.52	1.52	1.58	1.59	1.57	1.52	1.60	1.67	1.63
2109	15.84	1.23	1.52	1.52	1.57	1.62	1.59	1.52	1.64	1.65	1.65
2139	15.70	1.24	1.52	1.51	1.54	1.58	1.56	1.50	1.60	1.65	1.63
2189	15.72	1.25	1.53	1.53	1.54	1.58	1.56	1.50	1.59	1.66	1.64
2220	15.44	1.22	1.50	1.51	1.55	1.55	1.48	1.48	1.54	1.62	1.62

END OF CHARGE	CELL VOLTAGES						TEST TEMPERATURE: 0°C				
	1	2	3	4	5	6					
2013	11.82	2.56	1.19	1.16	1.05	1.16	1.21	1.20	1.19	1.21	1.20
2047	11.74	2.52	1.18	1.15	1.02	1.16	1.20	1.19	1.18	1.20	1.19
2079	11.71	2.51	1.18	1.15	1.00	1.15	1.20	1.18	1.17	1.20	1.19
2111	11.73	2.53	1.18	1.15	1.03	1.15	1.19	1.18	1.17	1.19	1.19
2138	11.70	2.52	1.18	1.15	1.02	1.15	1.19	1.18	1.17	1.20	1.19
2167	11.74	2.52	1.19	1.16	1.04	1.16	1.20	1.19	1.18	1.20	1.19
2226	11.70	2.51	1.18	1.15	1.03	1.15	1.20	1.19	1.18	1.20	1.18
2250	11.63	2.52	1.18	1.14	1.01	1.14	1.19	1.18	1.17	1.19	1.18
2013	15.44	1.39	1.50	1.55	1.59	1.52	1.53	1.56	1.55	1.57	1.49
2047	15.73	1.35	1.50	1.54	1.57	1.52	1.61	1.67	1.68	1.51	1.49
2079	15.70	1.39	1.50	1.54	1.51	1.51	1.58	1.63	1.63	1.51	1.49
2111	15.73	1.40	1.50	1.53	1.58	1.51	1.60	1.65	1.67	1.51	1.49
2138	15.70	1.42	1.50	1.53	1.58	1.51	1.51	1.58	1.67	1.51	1.49
2167	15.70	1.42	1.51	1.59	1.58	1.52	1.52	1.59	1.67	1.52	1.50
2226	15.68	1.44	1.51	1.58	1.52	1.53	1.64	1.65	1.65	1.52	1.50
2250	15.58	1.35	1.49	1.49	1.57	1.57	1.50	1.59	1.64	1.50	1.48

PACK NO.	MFR. SONG TON	CAPACITY 5 A.H.	DEPTH OF DISCHARGE: 25% PERCENT OF RECHARGE: 125%				TEST TEMPERATURE: 25°C ORBIT PERIOD: 3 HOURS							
			CYCLE NO.	PACK VOLTAGE	2.50 CURRENT	1	2	3	4	5	6	7	8	9
2068	10.61	2.51	1.04	.96	1.05	1.03	1.04	1.03	1.02	1.04	1.06	1.08	1.09	1.09
2102	10.25	2.51	1.06	.96	1.06	1.05	1.04	1.03	1.03	1.04	1.03	1.02	1.02	1.02
2139	11.49	2.52	1.13	1.03	1.11	1.14	1.14	1.13	1.13	1.13	1.18	1.17	1.17	1.15
2166	11.35	2.51	1.11	1.09	1.10	1.14	1.14	1.15	1.15	1.15	1.16	1.16	1.16	1.15
2196	11.18	2.51	1.10	0.95	1.08	1.13	1.14	1.13	1.13	1.14	1.15	1.15	1.15	1.13
2246	11.24	2.51	1.12	0.97	1.07	1.13	1.14	1.14	1.14	1.15	1.16	1.16	1.16	1.13
2277	10.99	2.51	1.09	0.93	1.05	1.10	1.11	1.11	1.11	1.11	1.14	1.14	1.14	1.11

END OF CHARGE	2068	14124	163	141	143	142	142	142	142	142	142
2102	14123	.61	1411	143	142	142	142	142	142	142	142
2139	14125	160	1411	143	141	141	141	141	141	141	141
2166	14114	.60	139	141	139	138	138	138	138	138	138
2196	14122	.61	1411	143	142	141	141	141	141	141	141
2213	14124	.62	1411	143	142	141	141	141	141	141	141
2227	14127	.62	142	144	143	141	141	141	141	141	141

PACK NO.	SERIAL NO.	CAPACITY	5 A.H.	TEST TEMPERATURE: 4/0 °C				ORBIT PERIOD: 3 HOURS
				DEPTH OF DISCHARGE: 4/0 %	PERCENT OF RECHARGE: 125 %	TEST TEMPERATURE: 4/0 °C	END OF DISCHARGE	
1989	11.69	4.01	1.10	1.13	1.10	1.10	—	1.07
2023	11.75	4.00	1.12	1.14	1.10	1.10	—	1.08
2055	11.85	3.93	1.13	1.15	1.12	1.12	—	1.09
2087	11.91	4.00	1.14	1.15	1.13	1.12	—	1.09
2118	11.35	4.12	1.20	1.20	1.20	1.20	—	1.17
2177	11.86	4.08	1.14	1.15	1.14	1.15	—	1.08
2201	11.84	4.08	1.14	1.15	1.14	1.14	—	1.07

PACK NO. 29
MTR. SONY TONE CAPACITY 5 A.H.DEPTH OF DISCHARGE: 15 %
PERCENT OF RECHARGE: 160 2/3TEST TEMPERATURE:
40°C

CYCLE NO.	PACK VOLTAGE	PACK CURRENT	1.50	1	2	3	4	5	6	7	8	9	10
1927	10.70	1.52	—	1.30	1.23	1.21	1.21	1.20	1.20	1.12	1.15	1.17	1.17
1961	10.71	1.52	—	1.30	1.21	1.20	1.20	1.19	1.19	1.12	1.14	1.17	1.17
1991	10.70	1.52	—	1.30	1.20	1.20	1.20	1.19	1.19	1.11	1.14	1.17	1.17
2025	10.74	1.52	—	1.30	1.20	1.20	1.20	1.20	1.20	1.12	1.15	1.18	1.18
2053	10.70	1.52	—	1.20	1.20	1.20	1.20	1.20	1.20	1.19	1.15	1.15	1.17
2082	10.67	1.52	—	1.20	1.20	1.20	1.20	1.19	1.19	1.11	1.14	1.17	1.17
2132	10.70	1.52	—	1.20	1.20	1.20	1.20	1.20	1.20	1.19	1.12	1.14	1.17
2163	10.65	1.51	—	1.20	1.20	1.20	1.20	1.19	1.19	1.10	1.10	1.13	1.17

CELL VOLTAGES

CYCLE NO.	PACK VOLTAGE	PACK CURRENT	1.50	1	2	3	4	5	6	7	8	9	10
1927	12.64	4.8	—	1.39	1.39	1.42	1.42	1.39	1.39	1.42	1.42	1.38	1.38
1961	12.63	4.8	—	1.39	1.39	1.40	1.40	1.38	1.38	1.42	1.42	1.38	1.38
1991	12.63	4.7	—	1.39	1.39	1.40	1.40	1.38	1.38	1.42	1.42	1.38	1.38
2025	12.66	4.5	—	1.39	1.39	1.40	1.40	1.38	1.38	1.42	1.42	1.38	1.38
2053	12.66	4.6	—	1.40	1.40	1.40	1.40	1.40	1.40	1.43	1.43	1.38	1.38
2082	12.68	4.6	—	1.40	1.40	1.40	1.40	1.40	1.40	1.43	1.43	1.39	1.39
2132	12.68	4.7	—	1.40	1.40	1.40	1.40	1.40	1.40	1.43	1.43	1.39	1.39
2163	12.70	4.8	—	1.40	1.40	1.40	1.40	1.39	1.39	1.40	1.40	1.39	1.39

CYCLE NO.	PACK VOLTAGE	PACK CURRENT	1.50	1	2	3	4	5	6	7	8	9	10
1871	10.36	2.50	1.15	1.15	1.15	1.15	1.15	1.15	1.16	1.16	—	1.15	1.14
1905	10.34	2.53	1.15	1.15	1.15	1.15	1.15	1.15	1.16	1.16	—	1.15	1.14
1937	10.33	2.51	1.16	1.16	1.16	1.16	1.16	1.16	1.17	1.17	—	1.15	1.15
1969	10.38	2.51	1.16	1.16	1.16	1.16	1.16	1.16	1.17	1.17	—	1.15	1.15
1991	10.31	2.54	1.15	1.15	1.15	1.15	1.15	1.15	1.16	1.16	—	1.15	1.14
2025	10.48	2.53	1.17	1.17	1.16	1.16	1.16	1.16	1.17	1.17	—	1.17	1.16
2053	10.32	2.51	1.16	1.16	1.16	1.16	1.16	1.16	1.17	1.17	—	1.15	1.14
2082	10.12	2.52	1.14	1.14	1.14	1.14	1.14	1.14	1.01	1.01	—	1.13	1.13

CYCLE NO.	PACK VOLTAGE	PACK CURRENT	1.50	1	2	3	4	5	6	7	8	9	10
1871	12.83	.73	1.41	1.41	1.42	1.42	1.42	1.42	1.42	1.42	—	1.41	1.42
1905	12.84	.70	1.41	1.41	1.41	1.41	1.42	1.42	1.42	1.42	—	1.42	1.42
1937	12.85	.72	1.41	1.41	1.42	1.42	1.42	1.42	1.42	1.42	—	1.42	1.42
1969	12.88	.70	1.41	1.41	1.42	1.42	1.42	1.42	1.42	1.42	—	1.43	1.43
1991	12.91	.70	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	—	1.42	1.42
2025	12.90	.70	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	—	1.43	1.43
2053	12.95	.70	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	—	1.43	1.43
2082	12.89	.59	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	—	1.42	1.42
2108	12.89	.59	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	—	1.43	1.43

CYCLE NO.	PACK VOLTAGE	PACK CURRENT	1.50	1	2	3	4	5	6	7	8	9	10
1871	10.36	2.50	1.15	1.15	1.15	1.15	1.15	1.15	1.16	1.16	—	1.15	1.13
1905	10.34	2.53	1.15	1.15	1.15	1.15	1.15	1.15	1.16	1.16	—	1.15	1.12
1937	10.33	2.51	1.16	1.16	1.16	1.16	1.16	1.16	1.17	1.17	—	1.15	1.15
1969	10.38	2.51	1.16	1.16	1.16	1.16	1.16	1.16	1.17	1.17	—	1.15	1.13
1991	10.31	2.54	1.15	1.15	1.15	1.15	1.15	1.15	1.16	1.16	—	1.15	1.14
2025	10.48	2.53	1.17	1.17	1.16	1.16	1.16	1.16	1.17	1.17	—	1.17	1.16
2053	10.32	2.51	1.16	1.16	1.16	1.16	1.16	1.16	1.17	1.17	—	1.15	1.14
2082	10.12	2.52	1.14	1.14	1.14	1.14	1.14	1.14	1.01	1.01	—	1.13	1.10

CYCLE NO.	PACK VOLTAGE	PACK CURRENT	1.50	1	2	3	4	5	6	7	8	9	10
1871	12.83	.73	1.41	1.41	1.42	1.42	1.42	1.42	1.42	1.42	—	1.41	1.42
1905	12.84	.70	1.41	1.41	1.41	1.41	1.42	1.42	1.42	1.42	—	1.42	1.42
1937	12.85	.72	1.41	1.41	1.42	1.42	1.42	1.42	1.42	1.42	—	1.42	1.42
1969	12.88	.70	1.41	1.41	1.42	1.42	1.42	1.42	1.42	1.42	—	1.43	1.43
1991	12.91	.70	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	—	1.42	1.42
2025	12.90	.70	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	—	1.43	1.43
2053	12.95	.70	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	—	1.43	1.43
2082	12.89	.59	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	—	1.42	1.42
2108	12.89	.59	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	—	1.43	1.43

CYCLE NO.	PACK VOLTAGE	PACK CURRENT	1.50	1	2	3	4	5	6	7	8	9	10
1871	12.83	.73	1.41	1.41	1.42	1.42	1.42	1.42	1.42	1.42	—	1.41	1.42
1905	12.84	.70	1.41	1.41	1.41	1.41	1.42	1.42	1.42	1.42	—	1.42	1.42
1937	12.85	.72	1.41	1.41	1.42	1.42	1.42	1.42	1.42	1.42	—	1.42	1.42
1969	12.88	.70	1.41	1.41	1.42	1.42	1.42	1.42	1.42	1.42	—	1.43	1.43
1991	12.91	.70	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	—	1.42	1.42
2025	12.90	.70	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	—	1.43	1.43
2053	12.95	.70	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	—	1.43	1.43
2082	12.89	.59	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	—	1.42	1.42
2108	12.89	.59	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	—	1.43	1.43

CYCLE NO.	PACK VOLTAGE	PACK CURRENT	1.50	1	2	3	4	5	6	7	8	9	10
1871	12.83	.73	1.41	1.41	1.42	1.42	1.42	1.42	1.42	1.42	—	1.41	1.42
1905	12.84	.70	1.41	1.41	1.41	1.41	1.42	1.42	1.42	1.42	—	1.42	1.42
1937	12.85	.72	1.41	1.41	1.42	1.42	1.42	1.42	1.42	1.42	—	1.42	1.42
1969	12.88	.70	1.41	1.41	1.42								

END OF CHARGE

EXERO

40.

PACK NO. 65	DEPTH OF DISCHARGE: 15 %	TEST TEMPERATURE: 0°C
MFR. GULTON CAPACITY 6 A.H.	PERCENT OF RECHARGE: 115 %	ORBIT PERIOD: 3 HOURS

CYCLE NO.	PACK VOLTAGE	PACK CURRENT	1.80	1	2	3	4	5	6	7	8	9	10
2141	12.32	1.81	1.23	1.24	1.23	1.24	1.24	1.23	1.23	1.21	1.24	1.23	1.17
2176	12.32	1.81	1.23	1.23	1.23	1.23	1.23	1.23	1.20	1.20	1.23	1.23	1.17
2214	12.38	1.82	1.24	1.24	1.23	1.24	1.23	1.23	1.21	1.21	1.24	1.24	1.19
2241	12.20	1.80	1.22	1.22	1.21	1.22	1.22	1.22	1.21	1.19	1.22	1.22	1.16
2271	12.40	1.81	1.24	1.24	1.24	1.24	1.24	1.24	1.21	1.21	1.25	1.24	1.17
2321	12.50	1.81	1.25	1.25	1.25	1.25	1.25	1.25	1.22	1.22	1.25	1.25	1.19
2352	12.42	1.80	1.24	1.25	1.24	1.24	1.24	1.24	1.22	1.22	1.24	1.24	1.19

2141	15.67	1.33	1.59	1.53	1.53	1.52	1.51	1.51	1.49	1.66
2176	15.84	1.34	1.62	1.63	1.56	1.54	1.52	1.52	1.50	1.67
2214	15.14	0.37	1.50	1.51	1.50	1.51	1.49	1.48	1.46	1.52
2241	14.27	1.36	1.40	1.40	1.40	1.40	1.38	1.38	1.39	1.37
2271	14.45	1.41	1.43	1.44	1.44	1.44	1.42	1.42	1.45	1.44
2321	15.45	1.33	1.57	1.55	1.54	1.53	1.51	1.51	1.51	1.59
2352	15.37	1.34	1.54	1.53	1.53	1.53	1.50	1.51	1.51	1.57

PACK NO. 66
MFR. GULTON
DEPTH OF DISCHARGE: 25%
CAPACITY 6 A.H.
PERCENT OF RECHARGE: 115%
TEST TIME: 10 MINUTES
ORBIT PERIOD: 3 HOURS

1940	9.70	1.68	1.65	1.60	—	1.67	—	—	1.61	—	—	1.56	1.53
1984	9.50	1.65	1.58	1.57	—	1.54	—	—	1.60	—	—	1.56	1.55
2007	9.44	1.63	1.56	1.58	—	1.53	—	—	1.60	—	—	1.55	1.53
2034	9.53	1.62	1.60	1.61	—	1.53	—	—	1.61	—	—	1.57	1.54
2063	9.67	1.66	1.64	1.67	—	1.55	—	—	1.62	—	—	1.59	1.56
2105	9.59	1.63	1.63	1.64	—	1.53	—	—	1.61	—	—	1.58	1.54
2122	9.51	1.65	1.60	1.62	—	1.53	—	—	1.61	—	—	1.58	1.54

PACK NO. 17		MFR. GULTON		CAPACITY 6 A.H.		DEPTH OF DISCHARGE: 25 %		TEST TEMPERATURE: 25°C		ORBIT PERIOD: 3 HOURS	
CYCLE NO.	PACK VOLTAGE	3.00 CURRENT		CELL VOLTAGES						END OF DISCHARGE	
		1	2	3	4	5	6	7	8		
2018	7.73	3.01	1.07	—	1.09	—	1.11	1.11	1.11	—	
2052	7.83	2.99	1.09	1.08	—	1.10	—	1.12	1.11	—	
2089	8.34	2.99	1.18	1.17	—	1.18	—	1.19	1.19	—	
2116	8.19	2.98	1.16	1.15	—	1.15	—	1.18	1.17	—	
2146	7.99	2.98	1.15	1.04	—	1.12	—	1.16	1.16	—	
2196	8.10	2.97	1.14	1.15	—	1.12	—	1.16	1.18	—	
2227	7.60	2.83	1.08	0.88	—	1.06	—	1.12	1.14	—	
2018	9.97	7.5	1.42	1.42	—	1.42	—	1.42	1.44	1.41	
2052	9.99	.74	1.42	1.41	—	1.42	—	1.42	1.44	1.41	
2089	9.99	.74	1.42	1.40	—	1.41	—	1.43	1.44	1.41	
2116	9.89	.76	1.39	1.36	—	1.36	—	1.37	1.35	1.38	
2146	9.99	.75	1.42	1.41	—	1.42	—	1.43	1.41	1.36	
2196	9.99	.74	1.42	1.40	—	1.41	—	1.43	1.44	1.41	
2227	9.99	.76	1.43	1.40	—	1.42	—	1.43	1.43	1.41	
PACK NO. 18		MFR. GULTON		CAPACITY A.H.		DEPTH OF DISCHARGE:		TEST TEMPERATURE:		ORBIT PERIOD:	
END OF CHARGE		PERCENT OF RECHARGE:		3 HOURS		END OF DISCHARGE		TEST TEMPERATURE:		ORBIT PERIOD:	
SECURED											
C12											

PACK NO.	MFR.	CAPACITY	3000 A.H.	DEPTH OF DISCHARGE:		TEST TEMPERATURE: 25 °C	ORBIT PERIOD: 3 HOURS	END OF RECHARGE
				END OF DISCHARGE	PERCENT OF RECHARGE			
1691	6.55	3.02	—	1.11	1.13	1.14	1.10	1.95
1735	6.63	3.02	—	1.13	1.13	1.14	1.10	1.92
1757	6.75	3.02	—	1.14	1.14	1.14	1.06	—
1789	6.75	3.03	—	1.14	1.14	1.14	1.07	—
1816	6.66	3.01	—	1.13	1.14	1.13	1.09	1.92
1845	6.75	3.05	—	1.15	1.15	1.14	1.12	1.06
1904	6.49	3.10	—	1.14	1.14	1.10	1.10	1.89
1928	6.52	3.02	—	1.14	1.14	1.10	1.09	1.93
1691	8.75	1.97	—	1.45	1.41	1.56	1.43	1.41
1725	8.76	1.93	—	1.46	1.43	1.54	1.41	—
1757	8.74	1.93	—	1.46	1.41	1.54	1.43	—
1789	8.73	1.93	—	1.47	1.42	1.56	1.42	—
1816	8.81	1.73	—	1.48	1.42	1.57	1.43	1.42
1845	8.82	1.72	—	1.49	1.43	1.58	1.44	1.42
1904	8.83	1.76	—	1.50	1.43	1.56	1.44	1.43
1928	8.72	1.68	—	1.47	1.43	1.53	1.42	1.42

PACK NO. 110 MFR. G.E. CAPACITY 12 A.H.	DEPTH OF DISCHARGE: 15 % PERCENT OF RECHARGE: 115 %	TEST TEMPERATURE: 0°C ORBIT PERIOD: 90 MINUTES
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2.07

64

PACK NO. 124
MFR. G.E.
CAPACITY 12 A.H.

DEPTH OF DISCHARGE: 25 %
PERCENT OF RECHARGE: 115 %

TEST TEMPERATURE: 0°C
ORBIT PERIOD:
90 MINUTES

3.45

65

PACK NO. 82 MFR. G.E. CAPACITY 12 A.H.	DEPTH OF DISCHARGE: 25 % PERCENT OF RECHARGE: 125 %	TEST TEMPERATURE: 25°C ORBIT PERIOD: 90 MINUTES
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PACK NO. 96 MFR. G.E. CAPACITY 12 A.H.	DEPTH OF DISCHARGE: 40% PERCENT OF RECHARGE: 125%	TEST TEMPERATURE: 25°C ORBIT PERIOD: 90 MINUTES
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6.00

67

PACK NO. 85	DEPTH OF DISCHARGE: 15 %	TEST TEMPERATURE: 40°C
MFR. G.E.	PERCENT OF RECHARGE:	
CAPACITY 12 A.H.	160 %	ORBIT PERIOD: 90 MINUTES

CYCLE NO.	PACK VOLTAGE	3.60 CURRENT	CELL VOLTAGES				
			1	2	3	4	5
3835	5.97	3.58	1.20	1.19	1.18	1.19	1.20
3872	5.94	3.61	1.20	1.19	1.17	1.18	1.19
3907	5.94	3.55	1.20	1.19	1.17	1.17	1.18
3934	5.96	3.56	1.20	1.19	1.18	1.18	1.19
3966	6.03	3.57	1.21	1.20	1.19	1.19	1.20
4000	5.95	3.60	1.20	1.19	1.17	1.17	1.18
4064	5.97	3.56	1.21	1.20	1.19	1.19	1.20
4098	5.93	3.56	1.20	1.19	1.10	1.13	1.19
4132	5.82	3.54	1.18	1.16	1.15	1.15	1.16
4216	6.03	3.45	1.22	1.21	1.20	1.20	1.21
4298	5.94	3.54	1.22	1.21	1.20	1.20	1.21
END OF DISCHARGE							
3835	7.13	2.87	1.42	1.42	1.43	1.43	1.42
3872	7.13	2.85	1.43	1.43	1.43	1.42	1.42
3907	7.14	2.88	1.42	1.43	1.43	1.42	1.42
3934	7.14	2.87	1.43	1.43	1.43	1.42	1.42
3966	7.14	2.84	1.43	1.43	1.43	1.42	1.42
4000	7.14	2.80	1.43	1.43	1.43	1.42	1.41
4064	7.17	2.76	1.44	1.43	1.44	1.43	1.43
4098	7.16	2.70	1.43	1.44	1.44	1.43	1.43
4132	7.11	2.71	1.39	1.40	1.40	1.41	1.40
4216	7.20	2.90	1.44	1.44	1.44	1.44	1.43
4298	7.15	2.75	1.43	1.43	1.43	1.42	1.42
END OF CHARGE							

21.88

68.

PACK NO. 97 MFR. G.E. CAPACITY 12 A.H.	DEPTH OF DISCHARGE: 25 % PERCENT OF RECHARGE: 160 %	TEST TEMPERATURE: 40°C ORBIT PERIOD: 90 MINUTES
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4.80

69

PACK NO. 111	DEPTH OF DISCHARGE: 15 %	TEST TEMPERATURE: 0°C
MFR. G.E.	PERCENT OF RECHARGE: 115 %	ORBIT PERIOD: 3 HOURS
CAPACITY 12 A.H.		

CYCLE NO.	PACK VOLTAGE	3.60 CURRENT	CELL VOLTAGES				
			1	2	3	4	5
2003	6.12	3.63	1.23	1.23	1.21	1.22	1.22
2037	6.14	3.69	1.23	1.23	1.21	1.22	1.22
2069	6.13	3.70	1.22	1.22	1.20	1.22	1.22
2101	6.12	3.61	1.22	1.22	1.21	1.22	1.22
2128	6.14	3.65	1.23	1.23	1.21	1.22	1.22
2157	6.16	3.69	1.23	1.23	1.22	1.23	1.22
2191	6.13	4.10	1.23	1.23	1.21	1.22	1.22
2215	6.18	3.82	1.23	1.24	1.22	1.23	1.23
2003	7.83	.66	1.61	1.52	1.63	1.50	1.53
2037	7.81	.66	1.60	1.51	1.61	1.50	1.53
2069	7.85	.65	1.61	1.52	1.63	1.51	1.54
2101	7.72	.74	1.55	1.51	1.57	1.49	1.53
2128	7.80	.70	1.61	1.51	1.62	1.50	1.54
2157	7.82	.70	1.60	1.52	1.61	1.51	1.54
2191	7.33	.84	1.46	1.46	1.46	1.45	1.45
2215	7.94	.81	1.61	1.54	1.63	1.52	1.57

PACK NO. 125	DEPTH OF DISCHARGE: 25 %	TEST TEMPERATURE: 0°C
MFR. G.E.	PERCENT OF RECHARGE: 115 %	ORBIT PERIOD: 3 HOURS
CAPACITY 12 A.H.	6.00	

CYCLE NO.	PACK VOLTAGE	6.00 CURRENT	CELL VOLTAGES				
			1	2	3	4	5
2011	5.97	6.00	1.19	1.19	1.20	1.19	1.20
2045	5.97	6.01	1.19	1.19	1.19	1.19	1.20
2068	5.97	5.93	1.19	1.20	1.20	1.19	1.19
2100	5.95	6.00	1.19	1.19	1.19	1.19	1.19
2127	5.95	6.01	1.19	1.19	1.19	1.19	1.19
2156	5.97	6.00	1.19	1.20	1.20	1.19	1.20
2190	6.01	6.02	1.21	1.22	1.21	1.21	1.21
2214	6.03	6.01	1.21	1.21	1.21	1.20	1.21
2011	7.92	1.13	1.63	1.59	1.62	1.55	1.54
2045	7.84	.85	1.60	1.52	1.62	1.54	1.53
2068	7.86	.84	1.61	1.59	1.60	1.54	1.52
2100	7.73	.97	1.56	1.56	1.54	1.54	1.52
2127	7.86	.92	1.60	1.58	1.60	1.58	1.52
2156	7.86	.89	1.61	1.57	1.60	1.54	1.53
2190	8.00	1.40	1.62	1.62	1.60	1.57	1.57
2214	8.00	1.34	1.63	1.62	1.62	1.56	1.57

1.38

PACK NO. 83	DEPTH OF DISCHARGE: 25 %	TEST TEMPERATURE: 25°C
MFR. G.E.	PERCENT OF RECHARGE: 125 %	ORBIT PERIOD: 3 HOURS
CAPACITY 12 A.H.		

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES				
			1	2	3	4	5
2044	5.63	6.00	1.17	1.14	1.11	1.12	1.09
2078	5.67	6.03	1.16	1.14	1.12	1.13	1.09
2110	5.71	5.99	1.16	1.14	1.13	1.14	1.11
2142	5.70	6.01	1.16	1.14	1.13	1.13	1.11
2173	5.71	6.11	1.19	1.18	1.17	1.17	1.18
2232	5.78	6.09	1.17	1.15	1.14	1.14	1.15
2256	5.76	6.12	1.17	1.15	1.14	1.14	1.14
2044	7.09	1.50	1.42	1.41	1.41	1.41	1.40
2098	7.09	1.51	1.42	1.40	1.40	1.40	1.40
2110	7.10	1.50	1.42	1.41	1.41	1.41	1.40
2142	7.11	1.51	1.42	1.41	1.41	1.40	1.40
2173	7.06	1.52	1.41	1.40	1.41	1.40	1.40
2232	7.12	1.52	1.42	1.41	1.42	1.41	1.41
2256	7.12	1.53	1.42	1.41	1.41	1.41	1.40

1.50

PACK NO. 97	DEPTH OF DISCHARGE: 40 %	TEST TEMPERATURE: 25°C
MFR. G.E.	PERCENT OF RECHARGE: 125 %	ORBIT PERIOD: 3 HOURS
CAPACITY 12 A.H.		

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES				
			1	2	3	4	5
2034	5.11	9.47	1.01	1.05	.98	1.03	1.05
2068	5.30	9.59	1.03	1.09	1.03	1.06	1.07
2100	5.33	9.56	1.10	1.09	1.00	1.04	1.09
2132	5.54	9.48	1.10	1.12	1.10	1.10	1.10
2159	5.37	9.43	1.07	1.09	1.06	1.08	1.07
2188	5.49	9.47	1.10	1.12	1.09	1.10	1.11
2222	5.47	9.02	1.11	1.11	1.07	1.10	1.10
2246	5.45	9.60	1.12	1.11	1.05	1.09	1.10
2034	7.30	2.33	1.46	1.48	1.44	1.46	1.47
2068	7.24	2.38	1.45	1.46	1.43	1.45	1.45
2100	7.19	2.40	1.42	1.43	1.42	1.44	1.44
2132	7.28	2.37	1.46	1.47	1.43	1.45	1.45
2159	7.29	2.37	1.43	1.47	1.43	1.46	1.46
2188	7.29	2.26	1.47	1.48	1.44	1.46	1.47
2222	7.24	2.41	1.45	1.47	1.43	1.45	1.45
2246	7.18	2.39	1.44	1.44	1.43	1.44	1.44

2.40

71.

PACK NO. 86	DEPTH OF DISCHARGE: 15 %	TEST TEMPERATURE: 40°C
MFR. G.E.	PERCENT OF RECHARGE: 160 %	ORBIT PERIOD: 3 HOURS
CAPACITY 12 A.H.		

CYCLE NO.	PACK VOLTAGE	3.60 CURRENT	CELL VOLTAGES				
			1	2	3	4	5
1935	5.74	3.55	1.17	1.14	1.14	1.17	1.16
1997	5.79	3.60	1.17	1.14	1.15	1.17	1.15
2033	5.68	3.77	1.15	1.11	1.12	1.14	1.13
2061	5.78	3.54	1.17	1.10	1.15	1.17	1.15
2089	5.77	3.56	1.18	1.14	1.15	1.16	1.15
2148	5.72	3.55	1.17	1.13	1.13	1.16	1.14
2172	5.69	3.55	1.16	1.12	1.13	1.15	1.14
1935	6.95	1.15	1.39	1.40	1.40	1.40	1.40
1997	6.97	1.15	1.40	1.39	1.39	1.39	1.39
2033	6.98	1.14	1.40	1.39	1.39	1.39	1.39
2061	6.99	1.15	1.40	1.40	1.40	1.40	1.40
2089	7.00	1.15	1.40	1.42	1.42	1.40	1.40
2148	6.99	1.13	1.40	1.40	1.40	1.40	1.40
2172	7.00	1.15	1.40	1.40	1.40	1.40	1.40

1.15

PACK NO. 100	DEPTH OF DISCHARGE: 25 %	TEST TEMPERATURE: 40°C
MFR. G.E.	PERCENT OF RECHARGE: 160 %	ORBIT PERIOD: 3 HOURS
CAPACITY 12 A.H.	6.00	

CYCLE NO.	PACK VOLTAGE	3.60 CURRENT	CELL VOLTAGES				
			1	2	3	4	5
1802	5.52	5.97	1.14	1.13	1.12	1.08	1.06
1814	5.54	6.01	1.14	1.12	1.11	1.09	1.07
1900	5.52	6.02	1.13	1.12	1.12	1.08	1.06
1928	5.55	5.97	1.14	1.13	1.12	1.07	1.08
1956	5.55	5.97	1.14	1.13	1.12	1.08	1.08
2015	5.49	5.95	1.14	1.12	1.12	1.06	1.06
2039	5.43	5.96	1.12	1.11	1.10	1.05	1.03
1802	7.10	1.88	1.41	1.43	1.43	1.42	1.42
1814	7.11	1.86	1.43	1.42	1.42	1.41	1.41
1902	7.12	1.80	1.41	1.43	1.42	1.41	1.41
1928	7.14	1.85	1.41	1.43	1.42	1.41	1.42
1956	7.15	1.83	1.41	1.43	1.43	1.42	1.42
2015	7.14	1.76	1.41	1.42	1.42	1.41	1.42
2039	7.16	1.68	1.41	1.44	1.43	1.41	1.42

1.92

72.

PACK NO. 73 MFR. GULTON CAPACITY 20 A.H.	DEPTH OF DISCHARGE: 25 % PERCENT OF RECHARGE: 125 %	TEST TEMPERATURE: 25 °C ORBIT PERIOD: 90 MINUTES
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73

PACK NO. 76 MFR. GULTON CAPACITY 20 A.H.	DEPTH OF DISCHARGE: 15 % PERCENT OF RECHARGE: 160 %	TEST TEMPERATURE: 40°C ORBIT PERIOD: 90 MINUTES
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4.80

74

PACK NO. 90 MFR. GULTON CAPACITY 20 A.H.	DEPTH OF DISCHARGE: 25 % PERCENT OF RECHARGE: 160 %	TEST TEMPERATURE: 40°C ORBIT PERIOD: 90 MINUTES
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8.00

75.

PACK NO. 102	DEPTH OF DISCHARGE: 15 %	TEST TEMPERATURE: 0°C
MFR. GULTON	PERCENT OF RECHARGE:	115 %
CAPACITY 20 A.H.		ORBIT PERIOD: 3 HOURS

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL Voltages				
			1	2	3	4	5
1752	4.87	5.00	1.22	—	1.22	1.23	1.23
1786	4.92	5.99	1.23	—	1.23	1.23	1.23
1814	4.97	5.97	1.23	—	1.23	1.23	1.23
1852	4.92	6.91	1.23	—	1.23	1.23	1.22
1872	4.96	6.86	1.23	—	1.23	1.23	1.23
1907	4.97	6.03	1.23	—	1.23	1.23	1.23
1937	4.92	5.99	1.23	—	1.23	1.23	1.23
1988	4.92	5.95	1.23	—	1.23	1.23	1.23
1753	5.98	1.78	1.50	—	1.51	1.44	1.52
1786	6.01	1.80	1.57	—	1.58	1.50	1.51
1814	6.34	1.07	1.59	—	1.58	1.51	1.57
1850	6.16	1.09	1.53	—	1.51	1.47	1.53
1871	6.17	1.16	1.51	—	1.53	1.49	1.55
1907	6.17	1.50	1.55	—	1.55	1.50	1.56
1937	6.19	1.19	1.55	—	1.56	1.51	1.54
1988	6.16	1.06	1.51	—	1.52	1.47	1.54
			1.33				

PACK NO. 116	DEPTH OF DISCHARGE: 25 %	TEST TEMPERATURE: 0°C
MFR. GULTON	PERCENT OF RECHARGE:	115 %
CAPACITY 20 A.H.	10.00	ORBIT PERIOD: 3 HOURS

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL Voltages				
			1	2	3	4	5
1609	5.97	10.02	1.20	1.19	1.18	1.19	1.17
1639	5.99	10.28	1.20	1.20	1.19	1.20	1.18
1673	5.91	9.99	1.19	1.19	1.18	1.19	1.18
1704	5.93	9.62	1.20	1.19	1.18	1.20	1.18
1734	5.91	9.89	1.20	1.19	1.18	1.20	1.18
1764	6.02	9.94	1.21	1.21	1.21	1.21	1.20
1801	5.92	9.93	1.20	1.19	1.18	1.19	1.18
1845	5.99	9.81	1.17	1.19	1.14	1.19	1.17
1608	5.75	1.69	1.56	1.63	1.54	1.54	1.55
1643	7.29	1.80	1.57	1.59	1.57	1.57	1.57
1673	7.24	1.75	1.57	1.60	1.57	1.57	1.57
1707	7.65	1.69	1.57	1.57	1.57	1.53	1.51
1734	7.90	1.75	1.57	1.57	1.53	1.57	1.56
1764	7.94	1.81	1.57	1.57	1.57	1.57	1.57
1801	7.96	1.77	1.57	1.57	1.57	1.57	1.56
1845	7.83	1.71	1.57	1.57	1.57	1.57	1.57

2.30

761

PACK NO. 74 MFR. GULTON CAPACITY 20 A.H.	DEPTH OF DISCHARGE: 25 % PERCENT OF RECHARGE: 125 %	TEST TEMPERATURE: 25 °C ORBIT PERIOD: 3 HOURS
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2150

PACK NO. 58 MFR. CAPACITY	A.H.	DEPTH OF DISCHARGE: PERCENT OF RECHARGE:	TEST TEMPERATURE: ORBIT PERIOD: 3 HOURS
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PACK NO. 77 MFR. GULTON CAPACITY 20 A.H.	DEPTH OF DISCHARGE: 15 % PERCENT OF RECHARGE: 160 %	TEST TEMPERATURE: 40°C ORBIT PERIOD: 3 HOURS
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CYCLE NO.	PACK VOLTAGE	6.00 CURRENT	CELL VOLTAGES				
			1	2	3	4	5
1803	5.43	0.782	1.07	1.07	1.06	1.08	1.15
1840	5.50	0.772	1.12	1.08	1.07	1.09	1.15
1872	5.51	5.87	1.11	1.09	1.07	1.09	1.14
1904	5.50	5.88	1.10	1.09	1.08	1.09	1.14
1931	5.48	5.85	1.10	1.08	1.06	1.09	1.14
1960	5.60	5.94	1.13	1.11	1.10	1.11	1.16
2019	5.51	5.82	1.12	1.10	1.08	1.10	1.15
2043	5.50	5.85	1.11	1.09	1.07	1.09	1.14
1703	7.02	1.93	1.41	1.42	1.40	1.41	1.42
1740	7.01	1.93	1.41	1.40	1.40	1.41	1.41
1772	7.01	1.93	1.41	1.39	1.39	1.40	1.40
1804	7.03	1.93	1.41	1.40	1.38	1.40	1.40
1831	7.04	1.94	1.42	1.40	1.40	1.42	1.41
1860	7.05	1.94	1.42	1.41	1.40	1.41	1.42
2019	7.05	1.94	1.42	1.41	1.40	1.41	1.42
2043	7.04	1.94	1.42	1.41	1.41	1.41	1.42
			1.42				

PACK NO. 91 MFR. GULTON CAPACITY 20 A.H.	DEPTH OF DISCHARGE: 20 % PERCENT OF RECHARGE: 160 %	TEST TEMPERATURE: 40°C ORBIT PERIOD: 3 HOURS
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CYCLE NO.	PACK VOLTAGE	10.00 CURRENT	CELL VOLTAGES				
			1	2	3	4	5
1719	5.03	10.02	1.07	1.07	1.07	1.05	1.07
1758	5.12	10.09	1.08	1.07	1.05	1.05	1.01
1797	5.12	10.09	1.08	1.07	1.05	1.07	1.05
1835	5.13	10.09	1.08	1.07	1.05	1.07	1.04
1874	5.15	10.02	1.07	1.07	1.07	1.07	1.02
1913	5.13	10.02	1.07	1.07	1.05	1.07	1.04
1952	5.12	10.03	1.07	1.07	1.05	1.07	1.05
1991	4.99	10.00	1.07	1.07	1.05	1.07	1.06
1719	7.17	2.12	1.43	1.43	1.43	1.43	1.43
1758	7.17	2.12	1.43	1.43	1.43	1.43	1.43
1797	7.18	2.12	1.43	1.43	1.43	1.43	1.43
1835	7.18	2.12	1.43	1.43	1.43	1.43	1.43
1874	7.18	2.12	1.43	1.43	1.43	1.43	1.42
1913	7.20	2.12	1.43	1.43	1.43	1.43	1.43
1952	7.22	2.12	1.43	1.43	1.43	1.43	1.43
1991	7.23	2.10	1.43	1.43	1.43	1.43	1.43
1053	7.18	2.12	1.43	1.43	1.43	1.43	1.42

3.00

PACK NO. 84 MFR. GOWARD CAPACITY 20 A.H.	DEPTH OF DISCHARGE: 1.5 % PERCENT OF RECHARGE: 115 %	TEST TEMPERATURE: 0°C ORBIT PERIOD: 90 MINUTES
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PACK NO. 98 MFR. 4/20/45 CAPACITY 30 A.H.	DEPTH OF DISCHARGE: 25 % PERCENT OF RECHARGE: 115 %	TEST TEMPERATURE: 0 °C ORBIT PERIOD: 90 MINUTES
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END OF CHARGE	1.00%	6.144	5.15	1.946	1.53	1.53	1.53	—
2.00%	6.26	3.29	1.63	1.53	1.53	1.53	1.53	—
3.00%	6.18	4.24	1.62	1.53	1.53	1.53	1.52	—
3.50%	6.33	4.83	1.62	1.53	1.53	1.53	1.53	—
4.00%	5.93	4.40	1.56	1.53	1.53	1.53	1.53	—
4.50%	6.00	5.71	1.62	1.53	1.53	1.53	1.53	—
5.00%	6.22	4.62	1.63	1.53	1.53	1.53	1.54	—
5.50%	6.17	4.69	1.57	1.53	1.53	1.53	1.53	—
6.00%	6.29	4.36	1.63	1.53	1.53	1.53	1.53	—
6.50%	6.31	4.19	1.63	1.53	1.53	1.53	1.53	—
6.75%	6.29	4.20	1.65	1.53	1.53	1.53	1.53	—
7.00%	6.32	4.51	1.62	1.53	1.53	1.53	1.53	—
7.25%	6.02	4.04	1.53	1.53	1.53	1.53	1.53	—

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30

PACK NO. 112	DEPTH OF DISCHARGE: 15 %	TEST TEMPERATURE: 40°C
MFR. G-QUAD	PERCENT OF RECHARGE:	160 %
CAPACITY 20 A.H.		90 MINUTES

CYCLE NO.	PACK VOLTAGE	6.00 CURRENT	CELL VOLTAGES				
			1	2	3	4	5
3707	5.98	5.92	1.13	1.13	1.11	1.19	1.17
3716	5.92	5.90	1.11	1.17	1.20	1.18	1.16
3725	5.97	5.89	1.11	1.17	1.19	1.17	1.15
3734	5.94	5.88	1.11	1.17	1.19	1.17	1.15
3743	5.94	5.87	1.11	1.17	1.19	1.17	1.15
3752	5.91	5.86	1.11	1.17	1.19	1.17	1.15
3761	5.83	5.82	1.11	1.17	1.19	1.17	1.15
3770	5.68	5.68	1.06	1.12	1.13	1.14	1.10
3779	5.53	5.63	1.06	1.12	1.13	1.13	1.09
3788	5.48	5.54	1.05	1.11	1.13	1.13	1.09
3797	5.46	5.56	1.05	1.11	1.11	1.12	1.09
3806	5.34	5.45	1.01	1.01	1.03	1.11	1.06
3815	5.72	5.73	1.12	1.12	1.13	1.14	1.12
3824	5.68	5.80	1.12	1.16	1.22	1.12	1.09
3833	7.03	7.02	1.51	1.52	1.49	1.47	1.43
3842	7.33	7.57	1.52	1.51	1.45	1.46	1.47
3851	7.33	7.57	1.49	1.44	1.43	1.45	1.46
3860	7.34	7.53	1.52	1.52	1.49	1.47	1.46
3869	7.37	7.36	1.50	1.49	1.43	1.46	1.47
3878	7.28	7.95	1.47	1.45	1.43	1.44	1.43
3887	7.18	7.16	1.45	1.45	1.41	1.42	1.42
3896	7.17	7.31	1.45	1.45	1.43	1.42	1.42
3905	7.17	7.31	1.41	1.41	1.43	1.42	1.42
3914	7.21	7.17	1.42	1.47	1.42	1.43	1.43
3923	7.50	7.53	1.53	1.56	1.49	1.48	1.50
3932	7.59	7.62	1.51	1.51	1.49	1.55	1.54
3941	7.50	7.50	1.51	1.51	1.47	1.50	1.51

4130

PACK NO. 80	DEPTH OF DISCHARGE: 15 %	TEST TEMPERATURE: 0°C
MFR. GOULD	PERCENT OF RECHARGE: 115 %	ORBIT PERIOD: 3 HOURS
CAPACITY 20 A.H.		

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES				
			1	2	3	4	5
1822	6.13	6.04	1.23	1.23	1.23	1.23	1.24
1934	6.17	6.07	1.24	1.24	1.24	1.25	1.24
2011	6.17	6.08	1.24	1.24	1.24	1.24	1.24
2012	6.16	6.10	1.24	1.24	1.24	1.24	1.24
2013	6.16	6.09	1.24	1.24	1.24	1.24	1.24
2014	6.16	6.12	1.24	1.24	1.24	1.24	1.24
2015	6.17	6.11	1.24	1.24	1.24	1.24	1.24
2186	6.13	6.08	1.23	1.23	1.23	1.23	1.23
1823	7.66	.97	1.51	1.53	1.53	1.52	1.54
1824	7.65	1.32	1.53	1.63	1.52	1.55	1.56
1911	7.81	1.25	1.59	1.63	1.57	1.54	1.55
1912	7.78	1.19	1.57	1.62	1.60	1.54	1.55
1913	7.78	1.29	1.59	1.58	1.56	1.52	1.54
2125	7.79	1.30	1.59	1.59	1.58	1.54	1.56
2185	7.80	1.27	1.59	1.59	1.57	1.54	1.56
2187	7.69	1.11	1.53	1.53	1.53	1.52	1.51
		1.08					

PACK NO. 94	DEPTH OF DISCHARGE: 25 %	TEST TEMPERATURE: 0°C
MFR. GOULD	PERCENT OF RECHARGE: 115 %	ORBIT PERIOD: 3 HOURS
CAPACITY 20 A.H.		

CYCLE NO.	PACK VOLTAGE	CURRENT	CELL VOLTAGES				
			1	2	3	4	5
1821	6.09	10.04	1.15	1.19	1.21	1.21	1.19
1825	6.11	10.01	1.12	1.21	1.21	1.21	1.21
1828	6.08	10.04	1.11	1.19	1.17	1.21	1.20
1829	6.09	10.13	1.12	1.20	1.21	1.21	1.21
1836	6.03	10.15	1.05	1.20	1.20	1.21	1.21
1846	6.03	10.15	1.05	1.20	1.20	1.21	1.21
1850	6.11	10.10	1.15	1.25	1.25	1.23	1.25
1851	6.09	10.11	1.15	1.21	1.21	1.20	1.19
2057	5.94	10.07	1.10	1.11	1.12	1.20	1.19
1822	6.09	1.22	1.17	1.17	1.17	1.55	1.55
1825	7.67	1.15	1.53	1.53	1.53	1.51	1.61
1828	6.72	1.12	1.49	1.52	1.52	1.56	1.57
1829	7.70	1.54	1.48	1.48	1.48	1.48	1.59
1836	7.71	1.57	1.48	1.48	1.48	1.55	1.57
1836	7.61	1.72	1.49	1.49	1.48	1.53	1.55
2036	7.64	1.81	1.49	1.49	1.49	1.54	1.56
2059	7.53	1.70	1.47	1.47	1.56	1.57	1.53
		1.05					

2.50

23.

PACK NO. 105 MFR. G A U L D CAPACITY 20 A.H.	DEPTH OF DISCHARGE: 25 % PERCENT OF RECHARGE: 125 %	TEST TEMPERATURE: 25°C ORBIT PERIOD: 3 HOURS
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END OF CHARGE	PACK VOLTAGE	CURRENT	CELL VOLTAGES				
			1	2	3	4	5
1935	5.91	9.78	1.17	1.18	1.20	1.20	1.20
1939	5.93	9.98	1.16	1.19	1.20	1.20	1.20
1941	5.90	10.07	1.15	1.18	1.19	1.20	1.19
1943	5.90	10.08	1.15	1.18	1.17	1.17	1.18
2032	5.91	9.85	1.16	1.18	1.17	1.20	1.19
2049	5.93	10.12	1.16	1.19	1.19	1.20	1.19
2107	5.90	9.79	1.15	1.18	1.17	1.20	1.19
2132	5.88	10.82	1.15	1.17	1.19	1.19	1.18
1938	7.25	2.43	1.48	1.47	1.47	1.47	1.48
1939	7.23	2.32	1.47	1.44	1.44	1.43	1.45
1941	7.23	2.12	1.47	1.44	1.44	1.43	1.45
1943	7.22	2.51	1.4	1.44	1.44	1.44	1.45
2022	7.24	2.42	1.42	1.44	1.44	1.43	1.44
2047	7.26	2.49	1.47	1.45	1.45	1.44	1.46
2107	7.27	2.47	1.47	1.45	1.45	1.44	1.45
2132	7.28	2.69	1.46	1.45	1.45	1.45	1.45

PACK NO. 119 MFR. GOULD CAPACITY 20 A.H.	DEPTH OF DISCHARGE: 40 % PERCENT OF RECHARGE: 125 % 16.00	TEST TEMPERATURE: 25°C ORBIT PERIOD: 3 HOURS
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PACK NO. 108 MFR. GOULD CAPACITY A.H.	DEPTH OF DISCHARGE: 15 % PERCENT OF RECHARGE: 160 %	TEST TEMPERATURE: 110°C ORBIT PERIOD: 3 HOURS
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END OF CHARGE	PACK NO.	PACK VOLTAGE	6.00 CURRENT	CELL VOLTAGES				
				1	2	3	4	5
1780	6.03	6.08	1.20	1.29	1.30	1.20	1.22	1.22
1814	6.01	6.08	1.22	1.23	1.20	1.22	1.21	1.21
1844L	6.02	6.07	1.20	1.20	1.20	1.19	1.21	1.21
1878	6.04	6.09	1.21	1.20	1.20	1.20	1.21	1.21
1875	6.00	6.07	1.20	1.19	1.20	1.19	1.21	1.21
1925	6.12	6.09	1.22	1.22	1.23	1.22	1.23	1.23
1925	6.03	6.08	1.21	1.20	1.20	1.19	1.22	1.22
2016	6.01	6.05	1.20	1.20	1.21	1.19	1.21	1.21
1720	7.14	1.79	1.42	1.42	1.41	1.44	1.42	1.42
1814	7.13	1.92	1.42	1.42	1.41	1.43	1.42	1.42
1844L	7.12	1.81	1.42	1.42	1.41	1.43	1.42	1.42
1878	7.16	1.72	1.42	1.42	1.41	1.44	1.42	1.42
1875	7.08	1.74	1.40	1.41	1.42	1.41	1.40	1.40
1925	7.15	1.93	1.42	1.43	1.42	1.44	1.43	1.43
1975	7.17	1.93	1.43	1.43	1.42	1.44	1.43	1.43
2016	7.16	1.93	1.43	1.43	1.42	1.44	1.43	1.43
			1.93					

PACK NO. 132 MR. CAPACITY	DEPTH OF DISCHARGE: PERCENT OF RECHARGE:	TEST TEMPERATURE: ORBIT PERIOD: 3 HOURS
A.H.		

Q. 11

PACK NO. 79 MFR. GULTON CAPACITY 6 A.H.	DEPTH OF DISCHARGE: 50 % PERCENT OF RECHARGE: 300 %	TEST TEMPERATURE: 25°C ORBIT PERIOD: 24 HOURS
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1261

85.

PART NO. 93 MFR. G.E. CAPACITY 12 A.H.	DEPTH OF DISCHARGE: 50 % PERCENT OF RECHARGE: 200 %	TEST TEMPERATURE: 40°C ORBIT PERIOD: 2.4 HOURS
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36

PACK NO. 89
MFR. DELCO
CAPACITY 25 A.H.

DEPTH OF DISCHARGE: 40%
PERCENT OF RECHARGE:

TEST TEMPERATURE: 25°C
ORBIT PERIOD:
24 HRS

15506

87.

PACK NO. 95 MFR. GULTON CAPACITY 50 A.H.	DEPTH OF DISCHARGE: 25 % PERCENT OF RECHARGE: 115 %	TEST TEMPERATURE: 0°C ORBIT PERIOD: 90 MINUTES
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88

PACK NO. 123 MFR. GULTON CAPACITY 50 A.H.	DEPTH OF DISCHARGE: 15 % PERCENT OF RECHARGE: 160 %	TEST TEMPERATURE: 40°C ORBIT PERIOD: 90 MINUTES
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1300

PACK NO. 204
MFR. GULTON COMM.
CAPACITY 4 A.H.

DEPTH OF DISCHARGE: 25 %
PERCENT OF RECHARGE: 125 %

TEST TEMPERATURE: 25°C
ORBIT PERIOD:
90 MINUTES

1.25

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YES

PACK NO. 214	DEPTH OF DISCHARGE: 40 %	TEST TEMPERATURE: 25°C
MFR. GULTON COMM.	PERCENT OF RECHARGE: 125 %	ORBIT PERIOD:
CAPACITY 4 A.H.		90 MINUTES

END OF DISCHARGE	CYCLE NO.	PACK VOLTAGE	3.20 CURRENT	CELL VOLTAGES				
				1	2	3	4	5
	910	5.74	3.21	1.13	1.14	1.13	1.14	1.15
	945	5.55	3.22	1.11	1.11	1.03	1.10	1.13
	982	5.52	3.23	1.11	1.11	1.02	1.10	1.12
	1017	5.44	3.21	1.10	1.08	1.05	1.08	1.11
	1044	5.60	3.21	1.13	1.12	1.10	1.11	1.13
	1076	5.84	3.18	1.16	1.17	1.16	1.16	1.16
	1110	5.68	3.14	1.14	1.14	1.11	1.13	1.14
	1141	5.59	3.15	1.12	1.12	1.09	1.11	1.13
	1174	5.71	3.14	1.15	1.14	1.13	1.14	1.15
	1206	5.42	3.16	1.10	1.09	1.05	1.08	1.11
	1238	5.50	3.16	1.11	1.10	1.08	1.09	1.12
	1324	5.62	3.16	1.13	1.13	1.11	1.12	1.14
	1406	5.66	3.20	1.13	1.13	1.12	1.12	1.14
END OF CHARGE	910	7.26	2.01	1.46	1.44	1.45	1.44	1.46
	945	7.18	2.04	1.46	1.43	1.44	1.43	1.44
	982	7.25	2.02	1.46	1.44	1.45	1.44	1.45
	1017	7.29	2.02	1.47	1.45	1.46	1.45	1.46
	1044	7.32	1.99	1.49	1.45	1.46	1.45	1.47
	1076	7.31	1.98	1.48	1.45	1.46	1.45	1.46
	1110	7.33	1.98	1.48	1.45	1.46	1.45	1.47
	1141	7.32	1.98	1.47	1.45	1.46	1.45	1.47
	1174	7.31	2.00	1.47	1.45	1.45	1.45	1.47
	1206	7.30	2.03	1.48	1.45	1.46	1.45	1.47
	1238	7.32	2.02	1.47	1.45	1.46	1.45	1.47
	1324	7.32	2.03	1.47	1.45	1.46	1.45	1.47
	1406	7.39	1.94	1.49	1.40	1.42	1.42	1.49

2.00

91.

PACK NO. 228
MFR. GULTON COMM.
CAPACITY 4 A.H.

DEPTH OF DISCHARGE: 15 %
PERCENT OF RECHARGE: 160 %

TEST TEMPERATURE: 40°C
ORBIT PERIOD:
90 MINUTES

960

99

PACK NO. 240	DEPTH OF DISCHARGE: 25 %	TEST TEMPERATURE: 40°C
MFR. GULTON COMM.	PERCENT OF RECHARGE: 160 %	ORBIT PERIOD: 90 MINUTES
CAPACITY 34 A.H.		

CYCLE NO.	PACK VOLTAGE	2.00 CURRENT	CELL VOLTAGES				
			1	2	3	4	5
925	5.55	1.99	1.12	1.03	1.14	1.13	1.12
949	5.75	2.00	1.14	1.15	1.15	1.15	1.15
976	5.64	2.02	1.12	1.13	1.13	1.12	1.12
1048	5.55	1.98	1.10	1.11	1.11	1.10	1.10
1080	5.76	2.00	1.15	1.15	1.15	1.15	1.14
1116	5.61	2.00	1.11	1.12	1.12	1.12	1.11
1149	5.51	1.99	1.10	1.12	1.12	1.11	1.10
1183	5.60	1.98	1.11	1.13	1.12	1.12	1.11
1214	5.59	1.98	1.11	1.13	1.12	1.11	1.12
1414	5.57	2.01	1.11	1.13	1.12	1.12	1.11
END OF DISCHARGE							
925	7.02	1.26	1.43	1.41	1.42	1.41	1.42
949	7.13	1.50	1.43	1.42	1.43	1.42	1.43
976	7.12	1.42	1.43	1.42	1.42	1.41	1.42
1048	7.15	1.52	1.41	1.42	1.43	1.42	1.43
1080	7.13	1.56	1.43	1.42	1.43	1.41	1.43
1116	7.16	1.63	1.44	1.42	1.43	1.42	1.43
1149	7.16	1.53	1.42	1.42	1.42	1.42	1.43
1183	7.17	1.52	1.44	1.43	1.43	1.42	1.44
1214	7.19	1.56	1.45	1.43	1.43	1.42	1.44
1414	7.16	1.62	1.44	1.43	1.42	1.42	1.44
END OF CHARGE							

1.60

93.

PACK NO. 315
MFR. GULFON COMM.
CAPACITY 4 A.H.

DEPTH OF DISCHARGE: 15 %
PERCENT OF RECHARGE: 115 %

TEST TEMPERATURE: 0°C
ORBIT PERIOD:
90 MINUTES

1630

94

PACK NO. 326 MFR. GULTOOL COMM. CAPACITY 24 A.H.	DEPTH OF DISCHARGE: 25% PERCENT OF RECHARGE: 115%	TEST TEMPERATURE: 0°C ORBIT PERIOD: 90 MINUTES
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